

Kant on Embodiment:  
Lessons from the *Critique of Pure Reason* and the  
*Metaphysical Foundations of Natural Science*



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# Declaration

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Rachel Siow Robertson



# Abstract

## Kant on Embodiment: Lessons from the *Critique of Pure Reason* and the *Metaphysical Foundations of Natural Science*

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My thesis offers an original reading of Kant's theory of cognition and the body's role in it. In the *Critique of Pure Reason* and the *Metaphysical Foundations of Natural Science*, Kant's subject is shown to cognize, and be cognized, through embodied activity in the material world.

I begin by demonstrating Kant's rejection of all-mental accounts of cognition. Neglecting the body leads to the dissolution of subjects, objects, and any cognitive relation between them. I show that Kant provides an alternative account in terms of embodied activity, focusing on three cases. First, the unifying structures required for sense perception could not be applied without embodied activity. Second, empirical self-consciousness depends on embodied activity in relation to objects in space. Third, scientific knowledge is made possible only through bodily activity, which reveals the causal forces constituting matter. In all three cases, the body is shown to have an active role in determining experience.

I then investigate the implications of my reading, providing a new interpretation of Kant's transcendental idealism – the causally active body is a transcendental condition of experience. I show how this contrasts with not only traditional readings of Kantian cognition as conditioned entirely by the structures and activity of the mind, but also less traditional readings which ascribe a cognitive role to the body only by stripping away its material properties. Even many contemporary non-Kantian accounts distinguish between the mind which acts in cognition, and the body which only passively receives causal affects. Developed in tandem with a robust metaphysics of matter as endowed with causal activity, Kant's account of the active body overcomes this mind-body distinction. Cognition is more thoroughly embodied than is commonly thought.

I finish by sketching an approach to Kant's account of life and freedom. I suggest that the transcendental status of the body in the theoretical realm paves the way towards a freely acting subject in the practical realm. Through casting the body as the actor in cognition, Kant provides the resources for a full characterization of the human subject.



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# Chapter 1

## Introduction

This thesis is about the role of the body in Kant's theory of cognition in the *Critique of Pure Reason* (*KrV*) and the *Metaphysical Foundations of Natural Science* (*MAN*).<sup>1</sup> On my reading, there is a sustained argument in both works showing that the cognitive subject is only able to cognize through embodied activity in the material world. I investigate to what extent the causally active embodiment of the cognitive subject can be said to be a transcendental condition of cognition on Kant's account.

My main motivation for pursuing the theme of the human body is that Kant consistently points in the direction of the embodiment of the cognizer with his notion of sensibility. He famously distinguishes between sensibility and the understanding as the two 'stems' of cognition (A15/B29). Sensibility is the receptive capacity to be affected by objects, through which 'objects are given to us' according to the forms of space and time (A15/B29). The understanding is the capacity by which concepts are formed and objects 'are thought' (A15/B29). A related distinction is between two kinds of representations required for cognition: intuitions and thoughts. A thought is a general representation referring to the object only 'mediately, by means of a mark [...] common to several things'. An intuition is a singular sensory representation which 'immediately' refers to the object (A320/B376-7). Kant uses very abstract terminology in making these distinctions. Nevertheless, a compelling way to interpret Kant's claims about sensibility is in terms of an embodied capacity for cognition. The claim about the singular representations of sensibility can be understood in terms of our embodied access to objects. When an object is literally before our eyes or within the grasp of our hands, we immediately refer to that object, and that object alone. By contrast, the understanding only provides reference to objects by means of a general

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<sup>1</sup> A and B followed by numbers refer to pages in the first and second editions of *KrV*. Other primary texts are specified by an abbreviation followed by Akademie pagination. For a full list of abbreviations, see the References section. I have followed Friedman's translation of *MAN* (2004), and Guyer and Wood's translation of *KrV* (1999).

description, consisting of a set of features, which may well be satisfied by many other objects. Furthermore, consideration of the body helps us to understand why Kant characterizes space and time as a contribution of sensibility rather than the understanding. The suggestion is that we represent objects from our embodied perspective on the here and now, with objects placed in a spatio-temporal structure in relation to this perspective. It is not clear how else to understand Kant's notion of sensibility and its forms of space and time, except in these embodied terms.

Kant's hints about the distinctive bodily contribution of sensibility continue throughout *KrV* and *MAN*. For example, he illustrates his account of the representation of space and time with examples of 'drawing' (*zeichnen*) lines (B292, A716/B744) and 'delineating' (*beschreiben*) figures (B154, A234/B237) such as drawing a triangle on a piece of paper (A713/B741). He uses these examples to show that the representation of space and time depends on 'motion, as action of the subject' (B155), arguing that this is something which 'cognition could never achieve by means of mere concepts' (A717/B745). Furthermore, when accounting for our capacity to perceive objects as existing at the same time, Kant appeals to causal interaction between the body of the cognizer and the objects of cognition:

From our experiences it is easy to notice that only continuous influence in all places in space can lead our sense from one object to another, that the light that plays between our eyes and the heavenly bodies effects a mediate community between us and the latter and thereby proves the simultaneity of the latter, and that we cannot empirically alter any place (perceive this alteration) without matter everywhere making the perception of our position possible; and only by means of its reciprocal influence can it establish their simultaneity and thereby the coexistence of even the most distant objects (though only mediately).  
(A213-4/B260-1)

Although this is a highly abstract, phenomenologically reduced sketch, Kant is writing about the cognitive subject as a body which is united by mutual causation to other bodies, such as planets and stars. Bodies in space reflect light into our eyes, and a change in spatial position is perceived according to a change in bodies everywhere. It is thanks to this causal interaction that we can perceive anything as simultaneously existing.

Apart from these appeals to embodiment in his general account of cognition, Kant also seems to need to refer to the body in accounting for specific kinds of cognition. One example is empirical self-consciousness, in which the purported object of cognition is oneself. In his famous Refutation of Idealism, Kant argues that empirical self-consciousness depends on consciousness of objects in space: ‘the consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me’ (B276). If this is read without any reference to one’s own body, it results in the puzzling claim that the cognitive subject relies on consciousness of objects in space for self-consciousness, yet does not identify with any one of these objects. Without embodiment, empirical self-consciousness reveals nothing more than the connected set of one’s own mental states. Another example is Kant’s account of our cognition in the case of natural science in *MAN* (in this work, ‘natural science’ refers to physics). According to Kant, natural science requires a special metaphysics, which investigates what can be known *a priori* of ‘a particular nature of this or that kind of thing, for which an empirical concept is given’ (*MAN* 4: 470). The special metaphysics of material nature rests on an empirical concept of matter, and the empirical content for this concept can only be provided through a ‘sense of feeling’:

[T]he first application of our concepts of *quantity* to matter [...] is grounded only on that property whereby it fills a space – which, by means of the sense of feeling, provides us with the quantity and figure of something extended, and thus with the concept of a determinate object in space, which forms the basis of everything else one can say about this thing. (*MAN* 4: 510)

Kant describes the ‘sense of feeling’ in terms of ‘contact’ and ‘impact’, making it clear he is talking about touch. Reaching towards a part of space occupied by matter, we sense resistance to our approach. As the only experience of the forces of matter, the bodily sense of touch provides the empirical content for this concept. This sense of touch is given a fundamental role in providing our knowledge in natural science, as it ‘forms the basis of everything else’ we can say about objects in space.

Kant seems to appeal to the embodiment of the cognitive subject in elaborating on the distinct contribution of sensibility to cognition in general, as well as specific cases of cognition such as empirical self-consciousness and natural science. However, the body is a deeply problematic entity for Kant – so much so, that interpreters of Kant

usually discuss his theories of cognition and sensibility without any reference to the body. The problem for developing Kant's hints into a full account of the role of the body in cognition can be spelled out in many different ways. Here is an initial gloss on the problem. Kant investigates the transcendental conditions of cognition. Transcendental conditions are known *a priori* and are not part of the empirical world of space and time. They are the conditions which make cognition of the empirical world possible. However, the body is an empirical object. Thus, neither Kant's transcendental account of cognition as a whole, nor his specific account of sensibility, can be understood as making reference to the body.

To explain Kant's notion of transcendental conditions in more detail, we need to look at his set-up of the Critical project in the Introduction to *KrV*. Kant poses his Critical question: 'how are synthetic judgments *a priori* possible?' (B19). This question regards claims such as 'the internal angles of a triangle add up to 180 degrees' and 'every event must have a cause'. At one level, the question is how we can know such claims apply universally and necessarily to objects such as triangles, without needing to have examined every, or indeed any, particular triangle. At a deeper level, Kant's Critical question encompasses more than the especially problematic areas of mathematics and metaphysics, extending to the possibility of cognition – the possibility of the representation of objects (A320/B376-77, A58/B83, B737). To use a classic example, say that we are both standing on a bridge watching a ship sail downstream. We both receive visual impressions from the ship when it is at the top of the stream, then in the middle, and then at the bottom of the stream. The challenge is to account for a shared space and time in which these different experiences come together and are determinate, such that we both cognize or represent a ship moving downstream. According to Kant, the much-needed structure of experience is a contribution of the subject to experience. The task of articulating this determining structure in answer to the Critical question is the 'transcendental' aspect of Kant's philosophy. Kant's transcendental methodology is to examine different features of cognition, arguing in each case that some contribution of the subject is necessary for that feature. Such contributions are thereby known *a priori* to be necessary conditions of cognition. Kant calls them transcendental conditions.

What does the label ‘transcendental’ mean? Here are two representative passages in which Kant answers this question:

I call all cognition transcendental that is occupied not so much with objects but rather with our mode of cognition of objects insofar as this is to be possible *a priori*. (A11/B25)

[N]ot every *a priori* cognition must be called transcendental, but only that by means of which we cognize that and how certain representations (intuitions or concepts) are applied entirely *a priori*, or are possible (i.e., the possibility of cognition or its use *a priori*). (A56/B81)

In general, Kant claims that *a priori* cognitions ‘occur absolutely independently of all experience’ (B2-3). The distinguishing marks of *a priori* cognitions are ‘necessity’ (‘it could not be otherwise’) and ‘universality’ (‘no exception at all is allowed to be possible’) (B4-5). The further distinguishing mark of *a priori* cognitions which are also transcendental is that they make cognition possible.

Kant contrasts his transcendental account with Locke’s ‘empirical’ account of cognition (A84-6/B116-8).<sup>2</sup> Although Kant acknowledges that Locke’s account is ‘without doubt of great utility’, he claims that ‘this attempted physiological derivation [...] cannot properly be called a deduction at all because it concerns a *quaestio facti*, the explanation of the possession of a pure cognition’ (A86-7/B119-20). Here, he borrows a legal distinction between ‘questions about what is lawful (*quid juris*) and that which concerns the fact (*quid facti*)’ (A84/B116). An empirical account answers questions *quid facti*, giving a causal explanation of how we come to possess the structures of experience such as our concepts and beliefs. By contrast, a transcendental account deals with questions *quid juris*. The task is to defend the possibility of cognition, providing a justification of the application of our structures to experience.

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<sup>2</sup> The context of these remarks on Locke is the Transcendental Deduction. Kant’s aim is to justify the application of the categories, the pure concepts of the understanding. But I take it that Kant is making a general point about the contrasts between empirical and transcendental accounts, because similar considerations about empirical conditions also apply to the justification of the *a priori* relation of space and time to their objects (A85/B118).

From this brief sketch of Kant's transcendental methodology, we can draw out the basic features of transcendental conditions. A transcendental condition: (a) is a contribution of the cognitive subject which constitutes some feature of cognition, (b) is known *a priori* (i.e. independently of experience), and (c) necessarily and universally holds for all objects of cognition.<sup>3</sup>

This leads to a problem for incorporating the body into Kant's transcendental account of cognition. Commentators generally allow that many different kinds of things can be called transcendental – 'a concept, the unity of self-consciousness, a form of intuition, a condition, etc.' (Horstmann, 2018, p. 6). However, the human body is an empirical object and cannot be called transcendental. Indeed, Kant's transcendental account already covers the notions required to even articulate a theory of embodiment, such as causation, empirical objects, and the cognitive subject. Thus, it seems as if Kant's empirical notion of the human body has no place in his transcendental account of cognition.

Another way of spelling out the problem of embodiment is in terms of Kant's transcendental idealism. This doctrine is related to his transcendental methodology in the following way: Kant draws a distinction between the objects as 'appearances', which appear to us under their transcendental conditions, and objects as they are 'in themselves' apart from their transcendental conditions, which are thereby excluded from the realm of cognition (A369). Kant's transcendental idealism raises two related concerns regarding the role of the body in cognition. One concern is that on most readings of Kant's transcendental idealism, the cognitive subject generates time and space as forms of representation. So, the subject cannot itself be an appearance in time and space. The worry is that if Kant introduces embodiment into his account of cognition, he has to make the following paradoxical claim: cognition depends on an object, namely, the body, which is in turn dependent on the conditions of cognition. A second concern is that characterizing cognition in terms of embodiment threatens the spontaneity of the understanding. Kant characterizes the understanding as the spontaneous capacity for rational activity, such as constructing, combining, and applying concepts. He also connects spontaneity to the capacity to form and enact

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<sup>3</sup> This may not be the account of transcendental conditions in the third *Critique*, but I set aside this issue for purposes of discussing cognition in the first *Critique* and *MAN*.



rules, claiming that the understanding introduces a normativity to cognition that cannot be derived from or determined by experience – the rules ‘are not borrowed from experience, but rather must provide the appearances with their lawfulness and by that very means make experience possible.’ (A126) The body stands in causal relations as part of the empirical world, so is incompatible with the spontaneous nature of the rational cognitive subject.

Due to these problems, Kant’s theory of cognition has not been read in embodied terms. For example, his references to the actions of ‘drawing’ and ‘motion’ are not read as bodily actions, but rather are said to be performed in the mind’s eye – they are neither spatial nor temporal activities (see e.g. Bennett, 1966, p. 143; Kitcher, 1990, p. 157; Longuenesse, 1998, p. 218; Wolff, 1963, p. 70). It has also been argued that empirical self-consciousness is the awareness of a unified sequence of mental states as mine, rather than involving any awareness of a particular outer object as my body (Longuenesse, 2006, p. 302; Aquila 1979, p. 276). Kant’s theory of natural science is often described in terms of overcoming the limited embodied standpoint and dependence on bodily senses, in favour of cognition of theoretical spaces and objects that are further away, greatly increased or reduced in size, or otherwise increasingly more abstract (Emundts, 2008, p. 131; Friedman, 2001, p. 65, 2013, pp. 178–179; Langton, 2001, p. 142; Warren, 2001a, p. 50, 2001b).<sup>4</sup>

Nevertheless, I think that accounts which neglect the role of the body leave important questions unanswered. What is the distinctive contribution of sensibility compared to the understanding, if it is not the capacity by which the bodily senses encounter objects in space and time? What makes empirical self-consciousness specifically *self*-consciousness, if it necessarily involves consciousness of general objects in space but not one’s own particular bodily location and perspective? What

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<sup>4</sup> A slightly different claim is that Kant’s concern in *KrV* is only the justification of scientific knowledge, such as (Falkenburg, 2000, p. 310). For an overview of this approach amongst German neo-Kantians see (Köhnke, 1991). I will not directly address this reading because I think that Kant is concerned with everyday perceptual experience as well. But I will argue that even if he were only focused on scientific knowledge, he would still assign an active role to the body as a transcendental condition of such knowledge (see especially *Chapter 5*).

do our very theories in natural science concern, if not the material world with which we are literally in touch?

This thesis investigates how far Kant can overcome the problems of embodiment to provide answers to these questions in embodied terms. I will follow Kant's transcendental method, arguing from specific features of cognition to the ways in which the embodiment of the cognitive subject makes those features possible. As I examine these roles of the body, I will explore to what extent these arguments can confer the status of a transcendental condition on embodiment, as a contribution of the cognitive subject to cognition – even though the body is an empirical object.

Here is a summary of the upcoming chapters. In *Chapter 2*, I develop an account of Kant's starting point for his transcendental account of cognition. What are the features of cognition for which transcendental conditions need to be given? Why think that embodiment needs to be involved? I provide a reading of the Paralogisms, showing how Kant rejects the rationalist doctrine of the soul and its associated problems for the body. This opens the way to reinstating the embodiment of the cognitive subject, and also results in the formulation of new questions regarding the unity of cognition. To further clarify Kant's starting point, I then consider the assumptions about cognition shared by two of his predecessors, Hume and Leibniz. I will show that a very general question of intentionality arises for both: how is the representation of objects in space and time possible? I suggest that intentionality comes under doubt without an account of the unity of cognition, which the cognitive subject must be able to provide. And I suggest that one of the roots of the problem of intentionality is a characterization of the cognitive subject as disembodied.

The task of the next three chapters is to fill in the details of Kant's account of the conditions of intentionality and the role of the body in it. I show that Kant provides an account of cognition in terms of embodied activity, focusing on three cases: sense perception, empirical self-consciousness, and natural science. In *Chapter 3*, I examine Kant's account of the role of the body in cognition in general, focusing on his account of the synthesis required for cognition. The first part of this chapter considers Kant's claim that space and time are infinitely divisible, yet are represented as a sequence of moments of absolute unity. I suggest that this puzzling mereology can be explained under an interpretation of synthesis as bodily activity. The cognitive subject organizes

sensations in the course of a single bodily action, resulting in a representation of a determinate spatio-temporal extent. I also suggest that this leads to an answer to the question of how intentionality is possible. The understanding provides rules which govern bodily activity, and the enactment of those rules through bodily activity establishes an immediate cognitive relation between the cognitive subject and the sensible object. The second part of the chapter defends my reading in the face of Kant's emphasis on the pure and the *a priori* in his account of synthesis. I suggest that Kant's account of bodily activity extends to the *a priori* representation of space in geometry. For geometry to refer to space at all, its content must include procedures for possible bodily activity. Thus, I argue that intentionality is achieved neither by the disembodied combination of concepts and representational contents alone, nor only by the body's causal receptivity. Instead, on Kant's account, referring to objects in space and time necessarily involves embodied activity. However, this leads to a conflict between the spontaneity of the understanding, and the causal nature of bodily activity. Kant needs the causality of the cognitive subject, but a full account of how causal activity comes under the rules of the understanding remains to be provided.

In *Chapter 4*, I consider how embodiment is a necessary condition of empirical self-consciousness. I examine existing suggestions that the argument of the Refutation of Idealism involves an appeal to embodiment as a necessary condition for the time-determination of empirical self-consciousness. I pose a dilemma for these readings, showing that they try to pull the body in two incompatible directions. They assign the body the material status of an object in space and a special epistemological status of sharing in the immunity of subjective experience to Cartesian doubt. If the body is an outer object, it does not seem that it can be subjectively known; if the body is subjectively known, it does not seem to be an outer object. As a solution, I argue that the body does not have to be immediately known to play its role in the determination of empirical self-consciousness. Instead, I focus on the causally active role of the body in providing the representation of space. I argue that this is a subjective aspect of the body, which also constitutes its status as an outer object. On Kant's account, the capacity for bodily activity is necessary for the time-determination of empirical self-consciousness. The result is an embodied notion of empirical self-consciousness, according to which the cognitive subject is active in the world and aware of herself as

such. However, there is a remaining problem regarding the conflict between the causally active capacities of the cognitive subject, and the capacity for spontaneity.

In *Chapter 5*, I address the question: what is bodily activity? I assess Kant's claim in *MAN* that perception of force through touch is fundamental to our knowledge of substance in space. I consider an objection that suggests that Kant cannot make this claim, on the grounds that he also claims that perception cannot have modal content. Causation is a modal notion, so how can he allow perception of causal force? My response is to provide a new reading of Kant's theory of touch. I argue that touch is not perception of the necessity of a cause, but it does involve awareness of the activity of our body in relation to other bodies. I show that embodied activity has a central role in Kant's accounts of the empirical cognition of the causal community of substances in space, the science of such a substance, and the irreducibility of its causal forces. This shows that Kant identifies bodily activity with causal activity. It is only through our own bodily activity that we come to know about causation in the first place.

*Chapter 6* brings the results of previous chapters together to address the problems for embodiment that I have raised in this introduction. I consider how in all three cases of sense perception, empirical self-consciousness, and natural science, the body is shown to have a causally active role in determining experience. I suggest that this provides a way to characterize sensibility as an embodied cognitive capacity, which contributes to the spatio-temporal structure of experience. I also suggest that there is a qualified necessity and universality to Kant's claims about this embodied contribution to experience. However, I show that the account of the embodied cognitive subject that emerges still faces a problem regarding spontaneity. Attention to the causally active role of the body in cognition serves to bring the tension between the realms of freedom and nature on Kant's account into sharper focus. I will point to Kant's further investigations of freedom beyond the first *Critique* as the way towards resolving this problem.

Before proceeding, I want to comment on the scope of this thesis. This work only examines embodied cognition in Kant's theoretical philosophy (of which *KrV* and *MAN* are parts), focusing on three kinds of cognition: sense perception, empirical self-consciousness, and natural science (specifically, physics). These are the parts of Kant's philosophy where the connection to embodiment seems most difficult to make.

If the connection can be made clear in even the most abstract and *a priori* cases, then it will be easier to consider the role of the body in more familiar areas such as anthropology and philosophy of biology.

At this point, it is worth raising and responding to an objection that comes from considerations of practical philosophy, which concerns ‘what ought to exist’ in the world and deals with the presuppositions of free and moral agency (A633/B661). Kant’s development of the notion of the subject in practical philosophy has been presented as an obstacle to providing an Embodiment Reading of *KrV*, in effect cutting off any investigation of the embodiment of the subject in the theoretical realm. For example, Aquila raises the concern that Kant cannot tie personal existence to embodiment (1979, p. 276). According to Aquila, if embodiment were a condition of human cognition then Kant would have an argument against the possibility of human existence in a disembodied form. But, as Aquila points out, this is in tension with Kant’s claim that the issue of continuing existence beyond this life is not capable of resolution through theoretical philosophy (Bxxxix-xxx). In response, my reading of Kant should be seen as defending the following conditional within theoretical philosophy: if there is human existence, it must be embodied. By human existence, I mean an existence which involves cognizing in a human way. This conditional claim is consistent with Kant’s distinction between the remits of theoretical and practical philosophy. According to Kant, theoretical philosophy cannot affirm the antecedent of this conditional when it comes to human existence beyond this life – for that, we will have to rely on practical philosophy. But there is still legitimate work for theoretical philosophy to do regarding an articulation of the nature and capacities of the cognizing subject in this life. I will leave it an open question as to whether he is right about human existence beyond this life.

I have a further reason to focus on *KrV* and *MAN* alone. I want to show that there is a sustained line of argument for the role of the body in cognition in these two works. This is in response to readings of *KrV* as a disjointed ‘patchwork’ of texts which either answer different problems (Guyer, 1987; for a classic statement of this view, see Kemp Smith, 1962), or are several attempts to answer the same problem (Melnick, 1989). Elements of Melnick’s reading of Kant, especially his discussion of rule-governed activity, are amenable to much of what I will say in this work. However, I have not

found Melnick a helpful proponent of embodiment in Kant's work because he takes such a piecemeal approach to *KrV*. His ambitious attempt to specify the exact paragraphs which constitute the 'final text' of *KrV* results in a pared-down text in which, for example, only seven paragraphs of the Transcendental Aesthetic survive. I admit that the argument regarding the body is not always clearly stated by Kant in *KrV* and that other conflicting lines of argument can be found. Furthermore, a reading that focuses on the role of the body is not the only way to respond to the patchwork thesis. Nevertheless, I think that a focus on embodiment provides a fruitful, unifying approach to many different aspects of cognition. We can be more generous to Kant, showing that he provides a surprisingly coherent answer to his Critical question across both editions of *KrV* and in *MAN*.

Finally, I will not address Kant's pre- and post-Critical emphasis on embodiment in detail. It has been consistently argued by several commentators that Kant was interested in embodiment throughout his career.<sup>5</sup> This provides valuable background to my reading of *KrV* and *MAN*. However, these commentators are slow to get to the details of the full Critical account. For example, even though Shell offers a helpful overview of Kant's continuous interest in the body throughout his life, she covers *KrV* in only 11 pages, allocating half a sentence to the Transcendental Deduction (Shell, 1996, pp. 135–146). Rukgaber provides a detailed analysis of pre-Critical discussions of incongruent counterparts before making a tantalizing start on the Transcendental Aesthetic, but goes no further (Rukgaber, 2009). By starting directly with Kant's Critical vision of cognition and matter, I provide a detailed account of the role of the body that has hitherto been lacking. In this way, I hope to show that the embodiment of sensibility is a central part of Kant's accounts of the cognition of objects in space and time, the awareness of ourselves that we have through empirical self-consciousness, and the provision of the empirical concept of matter that lies at the foundation of natural science.

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<sup>5</sup> For discussion of embodiment in Kant's pre-Critical work, see commentators such as Laywine (1993); Rukgaber (2009); Shell (1996); and Svare (2006). Rukgaber also covers the *Opus postumum*, as does Förster (1985, 2012). Although not defending an embodied reading of Kant's works, helpful accounts of the pre-Critical background to his discussion of mind and body include Ameriks (1982); Kitcher (1990, 2011); and Schönfeld (2000).

## Chapter 2

### Kant's rejection of the immaterial thinker

This chapter examines Kant's starting point for his account of cognition. I consider what specifically about cognition requires a transcendental account, and why we should think that embodiment is part of this account. I begin by framing Kant's theory of cognition against the background of his discussion of the rationalist notion of the soul in the Paralogisms section of *KrV*. Within the rationalist framework discussed by Kant, the cognitive subject is an immaterial thinker, identified with the soul and distinguished from the body. I show that in rejecting this framework, Kant opens the way to reinstating the embodiment of the cognitive subject. I also show that he poses a new set of problems regarding the unity of cognition. I then examine the connection between the conception of the cognitive subject as an immaterial thinker, and questions about the unity of cognition. To do this, I present two case studies of theories that Kant is concerned to reject – the accounts given by Hume and Leibniz. I show that a problem of intentionality arises for both: how is the representation of objects in space and time possible? I argue that this problem has its roots in their shared characterization of the cognitive subject as disembodied. I suggest that Kant's answer to his new questions regarding cognition will avoid this mistake.

#### 2.1. Introduction

In the Paralogisms<sup>6</sup> sections of *KrV*, Kant investigates the rational doctrine of the soul. This doctrine states that the nature and existence of the soul can be read off the subject 'I' of the proposition 'I think' independently of any experience. As Kant writes, rational psychology is 'not here seeking to learn in regard to the soul anything more than can be inferred, independently of all experience [...] from this concept 'I', so far as it is present in all thought' (A342/B400). Rationalists identify the 'I' with the

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<sup>6</sup> 'Paralogisms' with a capital letter refers to the section of *KrV*; otherwise, I refer to a fallacious argument.

immortal soul – an immediately known, imperishable, immaterial substance which bears representations as its predicates. The result is a distinction between the soul with its cognitive predicates, and the body with its spatial predicates: ‘I, as thinking, am an object of inner sense, and am called “soul”. That which is an object of outer sense is called “body.”’ (A342/B400).

Kant notes that two problems have traditionally plagued the rationalist doctrine of the soul. First, the rationalist notion of the soul leads to the traditional problem of mind/body interaction. Given the contrast between the simple, non-extended soul and the compound, extended body, how can soul and body interact? (A384-96; B427-8) Second, the challenge of Cartesian doubt arises. According to the rationalist, the ‘I think’ is a signal of immediate epistemological access to the subject ‘I’ and its contents (representations) in thought. Bodies in space have no such epistemological security: ‘I cannot really perceive external things, but only infer their existence from my inner perception’ (A368). We only mediately access bodies, inferring their existence as the causes of the contents of the soul. This reliance on inference from effect to cause means that the existence of bodies comes under doubt. It may be that bodies are merely a result of some all-mental ‘play’ (A368). Whatever has different features cannot be identical (Leibniz’s Law), so this distinction between immediate and mediate access is also used to argue that soul and body are separable: ‘I could exist merely as thinking being (*i.e.* without existing in human form)’ (B409). In other words, I could exist merely as a soul, and not as a body. These problems further motivate an account of the cognitive subject that bypasses the body within the rationalist framework. The rationalist task is to investigate the ‘I’ of the ‘I think’ independently of anything bodily, thereby revealing the nature of the disembodied thinking subject.

At the end of the Paralogisms, Kant claims that he has transformed the questions that arise within the rationalist framework. He makes this point in several different ways:

Now the question is no longer about the community of the soul with other known but different substances outside us, but merely about the conjunction of representations in inner sense with the modifications of our outer sensibility, and how these may be conjoined with one another according to constant laws, so that they are connected into one experience. (A385-6)



[T]he whole self-made difficulty comes to this: How and through what cause do the representations of our sensibility stand in combination with one another, so that those representations that we call outer intuitions can be represented according to empirical laws as objects outside us? (A387)

[T]he notorious question about the community between what thinks and what is extended would merely come to this: How is outer intuition – namely, that of space (the filling of it by shape and motion) – possible at all in a thinking subject? (A393)

[T]he only difficulty remaining is that concerning how a community of substances is possible at all. (B428)

A common theme in these passages is the suggestion that we now need to account for the unity of cognition. Kant makes several distinctions between our sources of cognition and then poses questions regarding the co-ordination or unity of our own cognition. The new questions for investigation regard how these sources are coordinated in cognition.

In this chapter, I investigate Kant's transformation of the traditional questions regarding the soul into questions regarding the unity of cognition. I suggest that the embodiment of the cognitive subject is a key component of this transformation. In §2.2, I provide a reading of the Paralogisms, showing how Kant rejects the rationalist doctrine of the soul and its associated problems for the body. This opens the way to reinstating the embodiment of the cognitive subject, and also results in the formulation of new questions regarding the unity of cognition. In §2.3, I consider further the problems that arise for a disembodied notion of the cognitive subject. I use two case studies of positions that Kant is concerned to reject – the accounts given by Hume and Leibniz. I show that a question of intentionality arises for both: how is the representation of objects in space and time possible? I argue that intentionality comes under doubt without an account of the unity of cognition, and that this problem has its roots in their shared characterization of the cognitive subject as disembodied. I suggest that Kant's account of cognition needs to avoid this mistake.

## 2.2. The Paralogisms

Kant discusses a different feature assigned to the soul by rationalists in each of the four sections of the Paralogisms: substantiality, simplicity, diachronic unity<sup>7</sup>, and existence in community with objects in space. The subject's immateriality, incorruptibility (inability to lose parts), personality and animating power supposedly follow from those four primary characteristics (A345/B403). Together, all these characteristics are supposed to provide the traditional notion of the immaterial, immortal soul. In this section, I show that the lesson of the Paralogisms is the emptiness of this concept. In §2.2.1, I show that the first three Paralogisms work to reject the claim there is secure knowledge of the soul as an immaterial substance. In §2.2.2, I show that in the fourth Paralogism, Kant challenges the traditional rationalist direction of investigation from soul to body. In §2.2.3, I consider how this rejection of the rationalist doctrine of the soul shapes the new questions for Kant's investigation of cognition.

### 2.2.1. Against knowledge of immaterial substance

The first three rationalist arguments discussed by Kant have the following structure:

- (1) All *F*s are *G*s.
- (2) The subject 'I' is *F*.
- (3) The subject 'I' is *G*.

The first premise specifies the characteristics of an object *F* that falls under a concept *G*. The next premise claims that the subject 'I' of the 'I' think' has those characteristics *F*. The conclusion is that the concept *G* can be applied to the subject 'I'.

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<sup>7</sup> Powell (1990, pp. 165–173), Kitcher (2011, pp. 186–187), and Longuenesse (2007, pp. 161–163) take Kant to mean 'personality' in the Lockean forensic sense, referring to consciousness which is constitutive of diachronic identity. Alternatively, Dyck reads the Paralogisms in connection with Wolffian concerns about distinguishing human persons from animals, where consciousness reveals that one fulfils a criterion of the status of personhood (2014, p. 168). Ameriks recognizes both Lockean and Wolffian notions (1982, p. 130). As Kant's diagnosis is the same regardless, I will not take a stand on which he means.

The following table presents each option for *F*, *G*, and the resulting conclusion:

Paralogism	<i>F</i>	<i>G</i>	Conclusion
1	‘That the representation of which is the absolute subject of our judgments, and hence cannot be used as the determination of another thing’ (A348)	Substantial: that which exists only as a bearer of properties, not as a property of something else (A348).	‘I, as object, am for myself a <i>self-subsistent</i> being or <i>substance</i> ’ (B407)
2	‘That thing whose action can never be regarded as the concurrence of many acting things’ (A351)	Simple: synchronic unity	The ‘I’ is ‘ <i>one</i> , and cannot be resolved into a plurality of subjects’ and so is a ‘simple substance’ (B408).
3	‘What is conscious of the numerical identity of its Self in different times’ (A361)	Identical: diachronic unity	The ‘I’ is ‘[i]n the different times in which it exists, numerically identical i.e., unity (not plurality)’ (A344/B402).

According to Kant, each of these rationalist arguments is a ‘paralogism’, a fallacious argument involving an equivocation between the transcendental and empirical meanings of each concept applied to the soul (A402-3). Transcendental meanings of concepts outline the characteristics which apply to objects of thought alone; empirical meanings of concepts specify characteristics which apply to objects in experience. According to Kant, it is one thing to determine some object of thought by a concept, describing characteristic ways that we think about objects. It is another

thing to determine an object of experience by a concept, describing the existence and nature of an object in space and time.

The rationalist arguments discussed in the Paralogisms invoke the transcendental meaning of the concept in their premises. After all, rationalists themselves specify that they proceed from the 'I' of the proposition 'I think' in thought alone, without any appeal to experience. The problem is that they then switch using the empirical meaning of the relevant concept in their conclusions. For example, the first paralogism states that the 'I' always occurs in the subject position of judgments: '*I* [subject position] think *x* [object position]'. This is a claim about the way that we think about the 'I', not an empirical claim that the 'I' refers to an object which can bear representational states without itself being a property of anything else. The second paralogism states that the 'I' is indivisible in thought. Again, this is a claim about how we think about the 'I' – we cannot think of any further parts to it. This is not the same as the empirical claim there is an indivisible object in space and time. The third paralogism states that whenever we are conscious of the 'I', we are conscious of it as one and the same occurrence which can accompany any of our conscious representations (A362). This is not equivalent to the empirical claim there is an enduring object which is identifiable and re-identifiable through time. In general, Kant rejects the rationalist claim that awareness of the 'I' in thought provides knowledge of the referent of the 'I' in experience as substantial, simple, or identical.

Kant's point is not that rationalists should instead look for experience of the soul. His diagnosis is more serious – rationalists will never find the referent of the 'I' of the 'I think'. Rationalists think that the indivisible 'I' refers to a unified substrate of representations. But according to Kant, the 'I' is the mark of something quite different:

The unity of consciousness [...] is here taken for an intuition of the subject as an object [...]. But this unity is only the unity of thinking, through which no object is given. (B421-2)

In making this claim, Kant draws on results of previous arguments, specifically his doctrine of the transcendental unity of apperception. According to this doctrine, the indivisibility of the active ordering of representations is a necessary condition of such combination. Whenever there is a representation, there is a numerically identical 'I' to

which that representation can be referred as its subject. But this 'I' is a result of the activity that orders representations, rather than a representation itself, so it eludes empirical analysis. As Kant puts it, it is 'the mere form of consciousness' which 'accompanies' conscious representations (A382-3). The 'I' in thought alone does not give us a unified object in intuition, an object amongst other objects in space and time. Strictly speaking, there is no object to be re-identified or divided in time – the 'I' of the 'I think' has 'no content' (A381).

The first three Paralogisms demonstrate the complete absence of any constitutive content of the 'I' in thought alone. This reveals the emptiness of the rationalist doctrine of the immaterial thinker. Rationalist arguments do not result in the determination of the subject as simple or identical, let alone as an immaterial substance. The 'I' of the 'I think' does not provide cognition of the soul as an immaterial substance.

### 2.2.2. Against immediate knowledge

In the Fourth Paralogism, Kant brings in epistemological considerations to his criticism of the rationalist doctrine of the soul. The rationalist argument under discussion is seemingly different in form and subject matter to the other Paralogisms. As a result, commentators have often set it aside in their discussions of the Paralogisms. For example, Kitcher characterizes the Fourth Paralogism as 'a defense of Transcendental Idealism which Kant wisely rethought and relocated in the second edition', because it provides 'misplaced' and 'cursory reflections about materialism' (1982, p. 514). This dismissal is typical of commentators on the section.<sup>8</sup> Nevertheless, I argue that the Fourth Paralogism should be investigated as part of Kant's argument against the rationalist doctrine of the soul. It shares in the diagnosis of the other three Paralogisms, as the argument involves the same kind of equivocation.

The Fourth Paralogism deals with the claim that the soul 'is in relation to possible objects in space' (A344/B402). This is Kant's characterisation of the Cartesian claim

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<sup>8</sup> See also Kitcher (1990, p. 183); Bennett (1974, pp. 71–72); Allison (2004, p. 341); and Grier (2001, p. 164).

that we have immediate epistemological access to the soul, unlike our indirect access to the body.<sup>9</sup> The rationalist argument proceeds as follows:

That whose existence can be inferred only as a cause of given perceptions has only a doubtful existence:

Now all outer appearances are of this kind: their existence cannot be immediately perceived, but can be inferred only as the cause of given perceptions:

Thus the existence of all objects of outer sense is doubtful. (A366-7)

According to the rationalist, the ‘I think’ is a signal of immediate epistemological access to the substantial subject ‘I’. By contrast, access to bodies is indirect because we have to infer their existence, as the cause of the contents of the soul. Because of this reliance on inference, the existence of objects of outer sense is doubtful. It may be that bodies are the result of the ‘play’ of the mind (A368). Kant warns that this argument leads to idealism, which here means ‘uncertainty’ regarding the existence of objects (A367).

Kant’s response is to apply the familiar diagnosis of the first three Paralogisms. There is an equivocation between transcendental and empirical meanings of the phrase ‘outside us’. He writes,

[T]he expression outside us carries with it an unavoidable ambiguity, since it sometimes signifies something that, as a thing in itself, exists distinct from us and sometimes merely something that belongs to outer appearance. (A373)

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<sup>9</sup> The claim to ‘immediate perception’ of the soul can be taken in two ways. Amongst Descartes’ several different formulations of the *cogito*, some suggest *immediate experience* of the soul (Hintikka, 1962; Markie, 1992; M. Wilson, 1982, pp. 51–71). Dyck provides evidence that Spinoza, Leibniz and even the pre-critical Kant claimed that we can have immediate cognition of our own existence (2014, pp. 182–183). According to Dyck (2014, p. 179), Wolff and his successors such as Baumgarten, Meier, and Crusius all interpret the step from *I think* to *I am* as an *immediate inference* from a thought.

The empirical meaning of the phrase ‘outside us’ has been introduced earlier on in *KrV*. According to Kant, sensibility in general is a passive ‘capacity (receptivity) to acquire representations through the way in which we are affected by objects’ (A19/B33). Kant distinguishes between two kinds of sensible apprehension, outer and inner sense. Outer sense is the ‘property of our mind’ by which ‘we represent to ourselves objects as outside us, and all as in space’ (A22/B37). Contrastingly, time is the form of inner sense, which is the property ‘by means of which the mind intuits itself, or its inner state’ (*ibid.*). The empirical meaning of ‘outside us’ regards an object of outer sense whose form is space. Kant contends that it is a mistake to contrast ‘the reality of outer objects’ with ‘the reality of the object of our inner sense (the reality of myself and my state)’ (A38/B55). Instead, ‘both [...] belong only to appearance’ (A38/B55). We are immediately aware of objects of outer sense, which are objects in space. We are also immediately aware of objects of inner sense, which are ‘my thoughts’ or ‘representations’ in time (A371). Consciousness of both is therefore equally immediate. Objects of inner sense have no epistemological priority over objects in space.

The transcendental meaning of the phrase ‘outside us’ refers to a thing in itself – that is, something which is independent of our perceptions of it. On this meaning of the phrase, soul and body are equally unknown. We do not have immediate perception of any object in the absence of sensibility (i.e. of things-in-themselves), so the existence of anything ‘in itself’ is ‘doubtful’ (A367). We do not have epistemological access to things-in-themselves, whether inner or outer.

Thus, Kant rejects the rationalist argument that objects of outer sense are doubtful in comparison to the soul (A367). Either the phrase ‘outside us’ is read in empirical terms, in which case the soul and body are equally immediate, or else it is read in transcendental terms, in which case both are equally unknown. This is not the conclusion that proponents of the arguments in the Paralogisms want. They argue that only ‘objects of outer sense’ are doubtful (A367). But Kant shows that these objects are as immediate as any of my inner representations, with the only difference being that they are also related to outer sense.

This reinforces the message of the first three Paralogisms regarding the emptiness of the rationalist notion of the immaterial soul. The idealist claims that we can

immediately cognize the 'I', getting the existence of the 'I' from the 'I think'. The idealist then contrasts this with our access to external objects, and finds no immediate perception of the kind that they think they have with the 'I am'. However, as Kant claims, the 'I think' does not amount to the 'I am' – the attribution of existence in an empirical sense to the 'I'.

Kant goes even further, suggesting that inner sense depends on the provision of content from objects in space in outer sense. The 'I' is 'the mere form of consciousness, which accompanies both sorts of representations and which can elevate them to cognitions only insofar as something else is given in intuition' – it is dependent on the material provided by sensibility, and does not represent any substance or even any persistence by itself (A382-3). Objects in space are more epistemologically immediate than the cognitive subject – the subject has immediate epistemological access to her own mental states and to objects in space, but not to herself as an immaterial substance existing outside of the sensible world.

Admittedly, this attempt at a decisive reply to rationalism is spoilt by Kant's claim that the objects of inner and outer sense 'are nothing but representations' (A371). This misstep into dogmatic idealism is one that Kant recognized and sought to fix in the second edition, replacing the Fourth Paralogism with the Refutation of Idealism. Nevertheless, it is worth following through the anti-idealist strand of argument as it appears in the Fourth Paralogism, because it is here that Kant opens the way to reinstating the embodiment of the cognitive subject, leading to a new set of problems regarding an account of cognition.

Under the rationalist doctrine of the soul, appeals to the body were difficult. If the cognitive subject and the body are two different substances, with the body only having spatial predicates, how could the body contribute to cognition? After Kant's arguments in the Paralogisms, the body is no longer to be characterized as a heterogeneous substance which has nothing to do with the cognitive predicates of the soul. Soul and body are instead taken as whatever appears in inner and outer sense respectively. Considering each sense, Kant claims that 'we find nothing absurd and nothing that makes the community of both modes of sense appear strange' (A386). There is no longer a problem of coordinating the two very different substances of soul and body. Thus, Kant takes himself to have defused the traditional problems associated with the



rationalist notion of the soul – the problems of mind/body interaction, and the problem of Cartesian doubt about the existence of the body in comparison to the soul.

In the Paralogisms, Kant cautions that the subject is not as sure a foundation for philosophical investigation as it seems. An account working from a disembodied notion of the subject ends up in problems of idealism further down the line. The fourth Paralogism rejects the traditional direction of investigation from soul to body, inner to outer. This does not quite get us to a claim about human embodiment – Kant reorders outer sense in general over inner sense. Nevertheless, Kant's rejection of the immaterial thinker, known through the 'I' without any experience, opens the way for the body to play a role in cognition.

### 2.2.3. Kant's new questions for investigation

Kant claims that he has transformed the traditional problems associated with the rationalist notion of the soul. He states the new questions for the investigation of the cognitive subject in different ways:

- a) Now the question is no longer about the community of the soul with other known but different substances outside us, but merely about the conjunction of representations in inner sense with the modifications of our outer sensibility, and how these may be conjoined with one another according to constant laws, so that they are connected into one experience. (A385-6)
- b) the whole self-made difficulty comes to this: How and through what cause do the representations of our sensibility stand in combination with one another, so that those representations that we call outer intuitions can be represented according to empirical laws as objects outside us? (A387)
- c) [T]he notorious question about the community between what thinks and what is extended would merely come to this: How is outer intuition - namely, that of space (the filling of it by shape and motion) – possible at all in a thinking subject? But it is not possible for any human being to find an answer to this question, and no one will ever fill this gap in our knowledge (A393)

- d) [T]he only difficulty remaining is that concerning how a community of substances is possible at all, the resolution of which lies entirely outside the field of psychology, and [...] without any doubt also lies outside the field of all human cognition. (B428)

In passages a) and b), Kant suggests that the new problem has to do with accounting for the unity of cognition. He makes several distinctions between our sources of cognition and the question then arises as to the co-ordination or unity of our own cognition. Given that we are open to the outer world through sensibility, how does this source come together with thought (the provisions of the law-giving understanding) to provide cognition of ourselves and other objects? Given a further distinction within sensibility between inner and outer sense, how are these sources and their respective objects coordinated? In c) and d), he refers to similar questions about unity. However, he states that something about these questions remains unanswerable.

Has Kant reached a dead end to the study of the cognitive subject after rejecting the framework of the rationalist doctrine of the soul? I suggest that he has not. Instead, he has set a new limit to the resources available to answer questions about the cognitive subject.

[T]here is no rational psychology as doctrine that might provide us with an addition to our self-consciousness, but only as discipline, setting impassable boundaries for speculative reason in this field, in order, on the one side, not to be thrown into the lap of a soulless materialism, or on the other side not to get lost wandering about in a spiritualism that must be groundless for us in life; on the contrary, it rather reminds us to regard this refusal of our reason to give an answer to those curious questions, which reach beyond this life. (B421)

Kant claims that the rational psychologist was wrong to try to claim to have knowledge of the thinking being beyond ‘this life’ – that is, beyond the bounds of sense. Rational psychology will not provide answers to the questions about the interaction between and persistence of substances beyond this world, including questions about whether the subject is either a material or immaterial substance, and about what happens to the subject before and after this present life (see also A384). Instead, he points towards a fruitful discussion within the safe confines set by the ‘discipline’ of rational

psychology. He claims that we should step away from spurious questions about rationalist ontology and any attempts to answer these questions with the resources of thought alone.

Thus, in c), there is a remaining mystery about why human cognition includes outer sensibility in the first place – that is, why we have an aspect of openness to the world. This is a question which concerns the origin of human cognition and is beyond our capacities of investigation. In d), the remaining question is the interaction of simple substances which are beyond experience. Again, this is a question that asks about an issue beyond the bounds of sense and also literally beyond present life. So, it cannot be answered. Questions of the origin and community of substances beyond this life are impossible to answer, but questions about the unity of cognition can be answered within this life with the resources of empirical consciousness. Kant rejects the questions raised under empty ontology of the immaterial thinking substance, which reaches a dead end in the opposition of soul and body. Instead, his new questions open up avenues of investigation regarding the cognitive subject.

I suggest that the new questions of unity raised at the end of the Paralogisms present the task of Kant's Critical project in another guise.<sup>10</sup> In the Introduction to *KrV*, Kant poses his Critical question: 'how are synthetic judgments *a priori* possible?' (B19) This is another question about the coordination of different sources of cognition. Kant famously develops these contrasting elements of cognition into his distinction between the 'two stems of human cognition, which may perhaps arise from a common but to us unknown root' – sensibility and the understanding (A15/B29). Just as in the Paralogisms, Kant refrains from answering the question of the origin of our cognitive capacities – the root of the two stems remains 'unknown'. He nevertheless has plenty to say about the conditions of the unity of cognition. We can therefore read Kant's Critical question as involving a request for an account of the unity of cognition.

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<sup>10</sup> In this, I agree with Shell's claim that the concluding remark to the Paralogisms 'summarizes the mission of the *Critique* in general' (1996, p. 143). This is in contrast to Svare's claim that Kant raises but does not answer his new question of unity: 'I cannot see that he explicitly deals with it anywhere in the *Critique*' (2006, p. 49). This is a surprising claim, given Kant's own set-up of his Critical project.

We have already seen one example of this transformation. The dead end of rationalist investigation into the empty 'I' is transformed into Kant's innovative doctrine of the transcendental unity of apperception as the condition of thought. Consideration of our ways of thinking cannot determine features of a substantial soul, but it can tell us about the conditions of thought which have hitherto gone unnoticed by rationalists. In general, Kant's transformation of the notion of the soul takes it from an immediately known immaterial substance in rational psychology to a subject which has no discoverable predicates except through transcendental philosophy. The cognitive subject is not discovered through the resources of reason or experience alone, but transcendently discovered through its contribution to cognition.

Even though Kant has defused the rationalist problems regarding the body, his own direction of investigation regarding the transcendental unity of apperception does not seem to involve the body. This raises the question of why we should think that the body will be involved in Kant's account. I address this question in the next section, connecting the unity of cognition to the embodiment of the cognitive subject.

## 2.3. Problems for Leibniz and Hume

In this section, I present two case studies which help to clarify the link between the unity of cognition and the embodiment of the cognitive subject. I take these case studies from Kant's 'two-front war' against rationalism and empiricism (Beck, 1978, p. 5). I compare Leibniz's rationalism with the opposite, empiricist, extreme – Hume. Both share a characterization of the subject of experience as disembodied, and both end up with surprisingly similar problems regarding the unity of cognition, and ultimately the very possibility of intentionality.

### 2.3.1. Leibniz

I begin with Kant's criticism of Leibniz's rationalist theory of cognition. Kant's claim is that Leibniz ends up with a disembodied monad in epistemological difficulty, trapped within its own intrinsic properties. I suggest that the question of the unity of cognition arises for Leibniz's disembodied system, and remains unanswered within it.

On Kant's reading, Leibniz's commitment to the rationalist doctrine of the soul results from his prior commitment to the intrinsic nature of substance.

Substances in general must have something inner, which is therefore free of all outer relations, consequently also of composition. The simple is therefore the foundation of the inner in things in themselves. But that which is inner in their state cannot consist in place, shape, contact, or motion (which determinations are all outer relations), and we can therefore attribute to the substances no other inner state than that through which we internally determine our sense itself, namely the state of representations. This completes the monads, which are to constitute the fundamental matter of the entire universe, the active power of which, however, consists merely in representations, through which they are properly efficacious merely within themselves. [...] [E]verything is only internal, i.e., occupied with its own representations (A274-5/B330-1)

Kant begins with Leibniz's claim that substance is associated with an entirely intrinsic nature. This involves a distinction between those things that can exist independently of relations to other things, and those that cannot. Whatever exists independently of all other things has an intrinsic nature, consisting solely of intrinsic properties which do not depend on or relate to any other thing.<sup>11</sup> Leibnizian substances – in Leibniz's terminology, 'monads' – are therefore isolated individuals which do not relate to each other.

Kant claims that Leibniz's notion of entirely intrinsic substance implies the traditional notion of the soul discussed in the Paralogisms. Intrinsic substantiality implies simplicity – substance is 'free of all outer relations, consequently also of composition' (A274/B330). Anything divisible depends upon its independently existing parts for its existence. As monads do not depend on anything for their existence, they must be indivisible.<sup>12</sup> This also implies immateriality, because it rules

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<sup>11</sup> In connecting Leibnizian substance with an entirely intrinsic nature, I follow Langton's reading of Leibniz (2001, Chapter 4).

<sup>12</sup> Leibniz offers several arguments for simplicity, including his famous 'mill argument' according to which perception and consciousness could only be explained by an appeal to a simple substance (*Monadology* §17). However, the 'mill argument' is greatly disputed by

out substances having any extrinsic properties such as ‘place, shape, contact, or motion’, indeed any state of a substance that can ‘stand in any efficacious connection at all with that of another’ (A274/B330; see also *Monadology* §3; *NE* p. 146). It also implies diachronic identity. All parts of matter – including organic bodies – are mere aggregates of phenomena. They are constantly changing, arising and perishing as they gain or lose parts (*NE* p. 231). The simplicity of monads guards against this possibility – because they cannot gain or lose parts, they are immortal. Leibniz also claims that we have immediate access to ourselves as thinking beings: in ‘thinking of ourselves’, we also ‘think of being, of substance’ (*Monadology* §30; see also *NE* p. 18). The only intrinsic property left for substance is ‘the state of representations’ (A274/B330). Monads are identified with cognitive subjects, defined as ‘subjects gifted with powers of representation’ (A266/B322). The result is the identification of cognitive subjects with immediately known, simple, persisting substances – that is, the traditional notion of the soul.<sup>13</sup>

The following is my elaboration on Kant’s criticism of Leibniz. According to Kant, Leibniz’s identification of the cognitive subject with immaterial substance has disastrous implications for his theory of cognition. The problem stems from two conflicting aspects: Leibniz reduces outer objects to inward consciousness, yet wants to preserve a distinction between dreams and reality.

First, Leibniz wants to distinguish between real and merely imaginary aggregates of phenomena. He admits that not everything that the monad perceives is veridical, so needs to make a principled distinction between reality and dreams. To do this, Leibniz

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commentators (Lodge & Bobro, 1998, p. 565; M. Wilson, 1974, p. 508). The argument from intrinsic nature is clearer and has greater systematic import, explaining Leibniz’s commitment to the other features of the soul.

<sup>13</sup> It has been suggested that Descartes is Kant’s real target in the Paralogisms, especially for the Second Paralogism about simplicity (Bennett, 1967). However, when Descartes argues for the indivisibility of the soul in his Sixth Meditation, he does so only to show distinguish between the soul and the body. As Wilson (1974, p. 509) writes, ‘the passage in the Sixth Meditation to which is sometimes referred in connection with this argument hardly resembles the proposed reasoning except in its conclusion’. Leibniz is a better fit for Kant’s rationalist target.

appeals to the ‘true criterion’ of reality, which lies ‘in the linking together of phenomena, i.e. the connectedness of what happens at different times and places and in the experience of different men’ (*NE* pp. 374-5, 392; *DM* §14). Leibniz’s claim seems to be that representation of the real world depends on aggregates of phenomena being brought into a genuine unity. The real world is one in which phenomenal aggregates are genuinely related to each other.

Second, Leibniz denies that substances are in genuine relation to one another. He claims that whatever appears to be a relation between two things is in fact just a display of harmonious patterns of changes in the intrinsic properties of monads (*Monadology* §78). To give a toy example, consider the case in which ball A collides with ball B. Leibniz construes the movement of B towards and then away from A as an intrinsic property of B’s monad, which contains the motion of A, and vice versa. The changes in the balls occur independently of each other, the result of internal developments in their associated individual monads.<sup>14</sup> More generally, intrinsic properties underlie all properties in the universe, even though Leibniz accounts for physical properties in relational terms. According to Leibniz, each body causally interacts by physical force with all other bodies – attracting and repelling them. This dynamic interaction of physical forces constitutes the motion, extension, and mass of bodies. Space and time are the relations that hold between these dynamically constituted bodies. Ultimately, all these relations are merely apparent. Leibniz compares physical relations to genealogical relations holding between siblings, parents, and other relatives in a family.<sup>15</sup> Just as genealogical relations are nothing over and above family members, physical relations hold between aggregates of phenomena which are nothing over and above the intrinsic properties of monads. As Langton puts it, ‘All the relations between things, and the relational properties of things, are reducible to – i.e. supervene on – the intrinsic properties of their relata’ (2001, p. 88).

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<sup>14</sup> The simplicity of this example masks the significant difficulties that face the reduction of relations, especially complex relations (Langton, 2001, pp. 81–89; Mates, 1986, pp. 217–219; Rescher, 1967, pp. 217–219; Royse, 1980, p. 181). For the purposes of tracing Kant’s diagnosis of Leibniz, I employ only Langton’s formulation of the general claim of reducibility.

<sup>15</sup> See Leibniz’s Fifth Letter to Clarke (Ariew & Clarke, 2000, pp. 46–47).

Kant's challenge is that the internal resources of a monad are insufficient for the determination of an aggregate as a genuine unity. I suggest that Leibniz makes three different attempts at providing a criterion of unity for reality: embodied causal community, coherence with other phenomena, and logical unity. I take each attempt in turn, showing that all three attempts are undermined by Leibniz's commitment to a substance with entirely intrinsic properties.

A first attempt is to appeal to the contribution of the bodily senses in distinguishing reality from dreams. Leibniz claims that there would be no knowledge at all without the involvement of the bodily senses: 'Every finite spirit is always joined to an organic body, and represents other bodies to itself by their relation to its own body' (*NE* p.155; see also *Monadology* §62).<sup>16</sup> One perceives (or 'expresses') the properties of monads by representing the states of the body associated with one's own monad, particularly its sense organs. Leibniz relies on his claim that all physical, hence relational, properties are reducible to the intrinsic properties of monads. Whatever extrinsic properties are expressed in sense perception can be taken as representing the intrinsic properties of monads, albeit in an indirect way. Kant acknowledges this aspect, writing that on Leibniz's characterization, sensibility allows knowledge of things in themselves: 'Leibniz took the appearances for things in themselves' (A268/B323; see also A44/B62; A270/B326). Thus, far from denigrating the senses as merely working to confuse the intellect, Leibniz seems to rely on the community of bodily sense organs with the world as constituting the requisite unity of well-founded phenomena.<sup>17</sup>

The embodiment of the subject supposedly provides a surprising breadth of access to the world. Leibniz claims that many of our perceptions do not get noticed. These unconscious, *petites perceptions* are contained in the monad and have the potential to be brought to attention in an act of apperception, all because of bodily community – relationships between bodies and the relationship between body and monad. Leibniz writes: 'At every moment there is in us an infinity of perceptions, unaccompanied by

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<sup>16</sup> For further discussion of this role of the body in perception for Leibniz, see (Adams, 1994, pp. 286–288; McRae, 1976, pp. 20, 28–29).

<sup>17</sup> A related suggestion from Parkinson is that Leibniz is appealing to causal coherence between phenomena (1982, p. 5). However, even Parkinson admits that causal language is 'not strictly accurate' at the metaphysical level of substances.



awareness or reflection; that is, of alterations in the soul itself' (*NE* p. 53). Sensory impressions are expressed as perceptions in virtue of their bodily effect. As long as motion does not 'cease to strike on our sense-organs', 'something corresponding to it' will 'occur in the soul because of the harmony between the soul and the body' (*NE* p. 54). As each body dynamically interacts with all other bodies in the world, the result is Leibniz's 'Mirror Thesis': 'this body expresses the whole universe through the connection of all matter in the plenum, so the soul also represents the entire universe in representing this body, which belongs to it in a special way' (*Monadology* §62). The states of one's body mirrors all the other bodies in the physical world, so each monad has perceptions of the whole world.

However, Leibniz's denial of the reality of all relational properties, particularly any physical properties, ultimately undermines his appeal to embodied causal community. Although he makes an attempt at a distinction between perception and thought in terms of bodily involvement, he also reduces all causal relations and spatial properties to the internal, non-extended properties of the perceiving monad. The 'special' relation between monad and body is no more than the representation by the dominant monad of a group of monads associated with it (Rescher, 1991, p. 218). Cognition of bodies – our own and others – occurs without any other substance affecting us. Thus, outer sense and its objects, which are divisible, extended bodies in space, have no genuine unity. Unity is only found in inner sense and its objects – the simple unity of the perceiving monad.

Leibniz's appeal to the bodily senses is unsuccessful. A second option that has been suggested in the literature on Leibniz is that he has a practical criterion for reality. We can judge what we perceive on the basis of how it coheres with other phenomena, testing how it predicts future phenomena and how it is explained by past phenomena (Adams, 1983; Shell, 1996, pp. 17–19). The result is an intersubjective measure for reality. However, this practical criterion does not tell us what genuine unity consists in, nor how it is any different from a merely imaginary or accidental aggregate of appearances. Leibniz needs a metaphysical criterion for reality, not just a test that tells us when phenomena are well-founded.

Thus, Leibniz's criterion of unity reduces to the level of intrinsic properties. This brings us to the third attempt at distinguishing reality from dreams. The claim is that

the unity required for reality has to do with the intrinsic properties of monads (Mondadori, 1982; Rescher, 1967, pp. 86–87). Leibniz himself comments that the ‘unity that collections [i.e., aggregates] have is merely a respect or relation, whose foundation lies in what is the case within each of the individual substances taken alone’ (*NE* p. 146).

There are only two kinds of internal unity on Leibniz’s account – either the substantial unity of the monad, which consists in its having no parts, or logical unity, which consists in the linking together of objects through their concepts according to the rules of thought. Aggregates of phenomena do not have the former kind of unity. Leibniz therefore claims that ‘the linking of phenomena [...] is itself verified by means of truths of reason’ (*NE* pp. 374–375). Leibniz’s conceptual system offers only the resources of logical or analytic necessity to account for the requisite unity. Reality can be determined in terms of the logical intelligibility and non-contradiction of the concepts of monads alone.

This brings us to Kant’s diagnosis of the problems with Leibniz’s system. According to Kant, logical unity is insufficient for the determination of reality. The concept of one substance by itself does not allow the logical deduction of the states of other substances, nor even the phenomena which these substances underlie. We cannot, for example, show that the ship being downstream follows from the ship being upstream through the concepts of ships and streams, and the rules of thought (reason) alone. Kant makes this point when he asks: ‘how would one conceive the possibility that if several substances exist, the existence of the one can follow reciprocally from the existence of the other (as an effect) [...]?’ (B292)

Kant notes that Leibniz himself admits that the internal conceptual resources of the monad alone are insufficient for the task. Kant writes, ‘Leibniz, who ascribed a community to the substances of the world only as conceived by the understanding alone, needed a divinity for mediation; for from their existence alone this community rightly seemed to him incomprehensible’ (B293). Leibniz ends up claiming that the only distinguishing factor between a well-founded phenomenal aggregate and a merely imaginary aggregate is that God in fact created the first kind of aggregate rather than the other. Instead of unity being found in the relations between monads, or even between the intrinsic properties of monads, it depends on God’s creative will. This

unity supposedly involves a further logical restriction. God has to create the best possible combination of consistent yet varied things, hence a maximally harmonious world (*Monadology* §§78-81).<sup>18</sup> Every real phenomenal aggregate is brought into existence according to this principle. The logical unity of phenomena rests on God's creative will, which itself is logically restricted by the principle of bringing about the best possible world.

Kant complains that the result is a notion of cognition which is at once implausibly limitless and yet greatly limited. First, cognition is implausibly limitless (A276/B332; see also A43/B60). The determination of reality occurs without any relation to an external world. Whatever is real can be known and is constrained by the rules of thought (reason) alone. This implies that sense and thought both access substance and its intrinsic properties, and are only distinguished in terms of degrees of clarity: '[Leibniz] sought everything in the understanding, even the empirical representation of objects, and left nothing for the senses but the contemptible occupation of confusing and upsetting the representations of the former' (A276/B332). Leibniz is a conceptualist to the extreme.

Second, cognition is greatly limited (B292-3). Even though Leibniz allows cognition beyond the limits of sensibility, cognition ends up extending only to the immediate experience of the soul. Leibniz's only resources for distinguishing between well-founded and merely imaginary phenomena are either the simple unity of the monad, or the conceptual unity of logical necessity. Neither do much to unify and make sense of the entire universe of aggregates of phenomena contained by each monad in thought. This is not just a problem about the possibility of knowledge of the world, but a problem for the possibility of cognition itself – that is, having representations which refer to the world. Here is one way to put the problem: to which world do our representations refer – the real world, or another, merely possible, world? Leibniz's first attempt at an answer is that perceptions refer to the real world because the perceiving monad is in a real, embodied relation to that world. However, Leibniz undermines this attempt with his claim that monads only have intrinsic properties. Perceptions only involve a relation in thought which can hold just as easily between

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<sup>18</sup> For further discussion of Leibniz's dependence on this principle, see Rescher (1991, p. 46) and Shell (1996, Chapter 2).

imaginary aggregates. Ultimately, Leibniz downplays even conscious perception. We perceive the whole universe but what is consciously perceived is greatly confused, and most of what is perceived will never be accessed by consciousness. Only God is immune from error (*NE* p. 237). His will alone relates monads to each other in the real world, and only He has full knowledge of their logical coherence in the best possible world (Thiel, 2011, p. 293).

In summary, Leibniz's characterization of the subject as an immaterial substance ultimately undermines his account of cognition. In appealing to the 'connectedness' of phenomena, Leibniz is reaching for an embodied, causal criterion for reality. He needs an embodied, perceiving subject. But because of his commitment to intrinsic substances, he ends up with a self-contained, immaterial thinker – a subject with an infinite number of largely unconscious perceptions inside itself, but disconnected from the real world outside itself. If substances do not causally act upon each other, then 'the linking together of phenomena' reduces to features internal to the perceiving, monadic subject. But even these are insufficient on Leibniz's account. He has to appeal to a further principle of divine creation to supplement the logical unity provided by the rules of thought. He is ultimately unable to distinguish between dreams and reality using his structures of monadic and logical unity. The question is how there can be a necessary but non-logical unity of cognition. This question remains unanswered by the resources of Leibniz's rationalist system.

### 2.3.2. Hume

Kant cautions that Humean skepticism is merely a 'resting place for human reason' and suggests that we should look for 'a complete certainty, whether it be one of the cognition of the objects themselves or of the boundaries within which all of our cognition of objects is enclosed' (A761-2/B789-90). In what follows, I offer my reading of Hume which elaborates on Kant's criticism.

Hume attempts to give a common-sense empiricist account of cognition. He distinguishes between impressions and ideas in an attempt to secure the difference between the contributions of thought and sense. In the *Treatise of Human Nature*, he claims that impressions are the most 'lively' and 'forceful' perceptions, and ideas are

‘the faint images of these in thinking and reasoning’ (*THN* 1.1.1.1.; p.1). Hume’s Copy Principle outlines how impressions and ideas relate:

All our simple ideas in their first appearance are deriv’d from simple impressions, which are correspondent to them, and which they exactly represent (*THN* 1.1.1.7; p.4).

With this apparatus in place, Hume shows that the traditional metaphysical notions of causation and objects come under threat. Regarding causation, he tries to identify a distinct empirical content to account for our experience of a necessary connection between cause and effect. However, in a singular instance of causation, all we perceive is one event following another; nor is there any way to infer *a priori* an effect from an impression of a cause (*THN* 1.3.14.1; p.155). Hume provides a similar skeptical argument in the case of objects, arguing that singular impressions are insufficient to provide the idea of a single object.

Hume suggests that an explanation is available for our continued use of these problematic concepts. In the case of causation, observation of a constant conjunction of these particular kinds of events leads the mind to expect one event given another. This transition of the mind from one event to the other is the foundation of our inference from cause to effect. Similarly, Hume accounts for the idea of a single, unified object in terms of the ‘smooth passage of the imagination along the ideas of the resembling perceptions’ (*THN* 1.4.2.36; p.205). He appeals to the extended, organic world of the senses in his explanations of the association of mental contents (Frasca-Spada, 2003, p. 160). For example, in his discussion of space and time, he relies on the ‘general maxim’ that the mind often confuses two closely related ideas. He allows (albeit hesitantly) an ‘imaginary dissection of the brain’ to explain this maxim in terms of animal spirits and brain traces (*THN* 1.2.5.20, p.60). He uses the same ‘general maxim’ regarding animal spirits when discussing the confusion that results in our taking several objects for a single, identical object (*THN* 1.4.2.32-33, pp.202-203).

One element of Hume’s approach to notions such as causation should be familiar from Kant’s criticism of Leibniz’s rationalism. Regarding the principle of causality, Kant writes that Hume ‘quite rightly remarked’ that ‘one could not base its truth

(indeed not even the objective validity of the concept of an efficient cause in general) on any insight at all, i.e., a priori cognition' (A760/B788). Like Hume, Kant endorses the anti-Leibnizian point that causal community cannot be determined according to merely logical considerations.

However, Kant rejects Hume's empiricism, showing that it is a position which is more skeptical and less commonsense than Hume tries to suggest. In his presentation of his naturalistic account of our concepts such as causation, Hume underplays the extent to which he is constrained by denial of causal relations and dissolution of objects, especially the perceiver's own body. For example, he declines to explore the distinction between impression and ideas further: 'I believe it will not be very necessary to employ many words in explaining this distinction. Every one of himself will readily perceive the difference betwixt feeling and thinking' (*THN* 1.1.1.1; pp.1-2). One might have thought that impressions of sensation arise from causal interaction with external objects, but Hume only says they 'arise in the soul originally, from unknown causes' (*THN* 1.1.2.1; p.7). Impressions are also not distinguished from ideas by reference to the external world. Despite the need to appeal to the body, Hume stops short because 'the examination of our sensations belongs more to anatomists and natural philosophers than to moral' (*THN* 1.1.2.1; p.8). He even fragments the body into separate perceptions:

[P]roperly speaking, 'tis not our body we perceive, when we regard out limbs and members, but certain impressions, which enter by the senses; so that the ascribing a real and corporeal existence to these impressions, or to their objects, is an act of the mind as difficult to explain as [of the external existence of our perceptions]. (*THN* 1.4.2.9, p.191)

The scarcity of Hume's resources is further revealed in his account of space and time. Regarding time, Hume makes an observation that Kant himself exploits in his own work. Our very experience of mental states in relations of simultaneity and succession already *presupposes* an idea of time. Hume comments that time is 'not deriv'd from a particular impression mix'd up with others, and plainly distinguishable from them; but arises altogether from the manner, in which impressions appear to the mind, without making one of the number' (*THN* 1.2.3.10, p.36). Hume is forced to expand the resources of experience beyond impressions themselves, to the 'manner'

in which they appear. Something similar applies to the origin of the idea of space: ‘from the disposition of visible and tangible objects we receive the idea of space’ (*THN* 1.2.3.7, p.35). Hume makes no mention of this extra resource of ‘manner’ or ‘disposition’ for formulating ideas, which is different from what is suggested by the Copy Principle.

Frasca-Spada suggests that we interpret Hume’s appeal to ‘manner’ as the claim that the ideas of space and time are an ‘expression of an original contribution of the mind to sense-experience’, with the self being that which contributes these manners to experience (Frasca-Spada, 1998, p. 75). This interpretation of Hume moves him in a Kantian direction: wherever there is perception, there is a sense of self, but this is the trace of an original addition of the mind. The failure to find the self in experience is a result of putting the self in the wrong category of an object capable of empirical discovery:

From what impression could this idea [of self] be deriv’d? This question ’tis impossible to answer without a manifest contradiction and absurdity; [...] self or person is not any one impression, but that to which our several impressions and ideas are suppos’d to have a reference. (*THN* 1.4.6.2, pp.251-2)

Hume comes close to reaching beyond his own empiricist resources in accounting for the self and experience of objects in space and time. Unifying operations of the mind are performed on several distinct impressions, bringing them together such that they are taken as a single, identical object, or as several such objects in causal sequences of events.

Even granting these expanded resources, Hume still faces a problem according to Kant. The only unity available to Hume is the non-necessary unity of imaginative associations between impressions. Hume only allows subjective successions of impressions. Time arises from the subject’s own experience, so there is no further temporal framework against which the subject can distinguish between, for example, successive perception of one object, and perception of a succession of objects. There are no grounds for an objective distinction between different temporal sequences. A similar problem arises for Hume’s account of the idea of causation. There are no grounds for objective causal sequences, in the sense that we could expect another

human cognizer to make the same judgment, given the same sequence of impressions. The overall picture is of a sequences of impressions, arriving from an ‘unknown source’ internal to the subject, and faintly imaged in ideas. From these sequences we cannot extrapolate out to an objective, external world. Hume ends up with a subject trapped within its own mental contents and psychological associations.

In fact, even solipsism is ambitious for Hume. He tries to identify a distinct empirical content to account for the idea of the self as an object that persists ‘invariable and uninterrupted’ through time (*THN* 1.4.6.4; p.255). However, on introspection, he finds ‘nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement’ (*THN* 1.4.6.4; p.252). He concludes (seemingly unhappily<sup>19</sup>) that there is only a ‘heap’ or ‘bundle’ of impressions (the empirical contents of the mind), and nothing more (*THN*, 1.4.6.4; p.252). Hume accepts that we still ‘ascribe an identity’ to this heap, but he compares this ascription to the ascription of identity to diverse objects, such as a ship undergoing constant repairs, or a running river (*THN* 1.4.6.11-14; pp.257-8). These are not really a single object, but a succession of objects in close relation to each other (*THN* 1.4.6.7, p.255). Nevertheless, we see them as one object because of an ‘operation of the imagination’ which relies on the subjective relations of contiguity, resemblance and causation holding between impressions (*THN* 1.4.6.15, p.259). The same operation happens in the case of the self, except that the relations are just resemblance and causation. Thus, the substantial soul is dismissed as a philosophical fiction (*THN* 1.4.6.15, p.259).

There is a mitigating factor that needs to be acknowledged regarding Hume’s investigation in the *Treatise*. Hume intends to provide a *reductio ad absurdum* of the Cartesian view of the simple substantial self, as well as the very prospect of intellectual investigation. He articulates this in the conclusion of Book I, turning from a ‘one-sided reliance on intellect’ (Baier, 1991, p. 1), which characterizes his preceding investigations, to a ‘careless’ or carefree philosophy in his subsequent investigations (*THN* 1.4.7.14, p.273). Hume’s point is that we cannot provide rational grounding for

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<sup>19</sup> Hume expresses his doubts in the Appendix to *THN*. He also claims in Book II that the idea of the self is the strongest we have – to the point of counting it as an impression (*THN* 2.1.11.4; p.317).



our beliefs – when we reason about the self, we dissolve it. We can only hope to achieve the more modest aim to ‘establish a system or set of opinions, which if not true (for that, perhaps is too much to be hop’d for) might at least be satisfactory’ to suit ‘common practice and experience’ (*THN* 1.4.7.14, p.272). In the context of Book II, Hume refers freely to ‘mind and body, that is *self*’ (*THN* 2.1.9.1, p.303, original emphasis). The self pervades Hume’s account, as that which observes constant conjunctions, has physiological dispositions to confuse objects, and is the ‘object of pride and humility’ (*THN* 2.1.3.2., p.280).

Nevertheless, I think that internal inconsistency remains for Hume. He needs to allow that something can be learned from experience of oneself, and he puts this in surprisingly strong terms:

For since all actions and sensations of the mind are known to us by consciousness, they must necessarily appear in every particular what they are, and be what they appear. Every thing that enters the mind, being in *reality* a perception, ’tis impossible any thing shou’d to feeling appear different. This were to suppose, that even where we are most intimately conscious, we might be mistaken. (*THN* 1.4.2.7, p.190)

Hume takes the set of perceptions that he accesses to be unproblematically given through introspection, yet his own arguments undermine this assumption.

The problem facing Hume’s introspective methodology can be brought out further by considering a problem raised by Chisholm for Hume’s notion of the self. Chisholm argues that introspective reports run thus: ‘*I* have found a perception of heat’, ‘*I* have not found the self’, and so on (1976, p. 40). In relying on introspection, Hume seems to be presupposing the very self he argues against. It might be thought that Hume could remove reference to the self, by reformulating ‘*I* am not hot’ as ‘heat is not found’. But Chisholm points out that the two statements are not equivalent. Just because I have found no heat, this does not make it true that heat is not found in general. Chisholm’s objection brings out Hume’s reliance on the fact that introspective investigation is limited to just one bundle of perceptions. When this is the case, the failure to find a perception of heat is equivalent to the demonstration that the perception of heat is not there.

Hume considers a similar question regarding the availability of an individuated bundle of perceptions:

all our particular perceptions...may be separately consider'd, and may exist separately, and have no need of any thing to support their existence. After what manner, therefore, do they belong to self; and how are they connected with it? (*THN* 1.4.6.3, p.252)

Hume's attempt at answering this problem is to appeal to relations of resemblance and causation holding between perceptions. The suggestion is that only the perceptions unified through these relations are available on introspection.

Hume's attempted answer is unsuccessful. Relations of causation and resemblance between perceptions are neither necessary nor sufficient to unify a bundle of perceptions. Regarding their sufficiency, it is possible for there to be a causal chain from one person's perceptions to a perception in another person's mind (Stroud, 1977, p. 125). Perhaps we only mean direct causal connections, which do not hold between people (we would have to be telepathic) – but this creates a problem when considering whether the relations are necessary to unify the bundle. Their necessity is challenged by a counterexample – I can have an impression of a book, turn my head and get an impression of a desk. The former impression neither resembles nor causes the latter, but both are mine (Stroud, 1977, p. 126). The problem is not helped by Garrett's attempted response that Hume does not need direct relations between perceptions, as long as there is a web of interrelations eventually extending to all of them (Garrett, 1997, pp. 172–173). What impressions I have at a given time is partly dependent on my will, such as my desire to turn my head, which in turn is caused by other prior perceptions. However, if we allow this web of interrelations, we cannot claim that we only mean direct causal connections as an answer to the first criticism regarding insufficiency.

It may be thought that we could unify the bundle of perceptions by providing a body-based structure to the mind. However, Hume cuts off his own appeal to the bodily conditions of cognition, because he only gives an account in terms of the mind's empirical contents and the subjective associations between them (Frasca-Spada, 1998,

p. 81). His restriction of intellectual investigation to the resources of experience prevents even the appeal to the body.

To sum up, Hume attempts to give a common-sense empiricist account of perception of events and persisting objects. This account requires an appeal to unity – unifying operations of the mind bring impressions together such that they are taken as a single, identical object, or as several such objects in causal sequences of events. However, this account is ultimately undermined because the only unity available to Hume is the non-necessary unity of imaginative associations between impressions. This means that the self is given a similar account as a sequence of impressions in relation to others. Such a self has no unifying capacity – it consists in the addition of just more impressions to the sequence, rather than the unification of that sequence. The problem is so acute that even very basic introspective reports such as ‘heat is not found’ cannot be made. There is not even an account of why the self consists in a certain bundle of impressions rather than any other impressions. There needs to be the provision of necessary unity to impressions, such that they necessarily belong together in one self and in a necessary order relative to each other. Without this necessary unity, the possibility of cognition remains unaccounted for within Hume’s ultra-empiricist system. Hume’s skeptical arguments lead to the dissolution of all external objects, and even the self, into a heap of mental contents and subjective relations between them. His account brings out the limits of empiricist resources regarding an account of such unity. This gives us reason to look with Kant for more stable ‘resting place’ for cognition than the resources of empiricism allow (A796/B797).

### 2.3.3. Summary of results from Leibniz and Hume

Both Hume and Leibniz face a serious problem regarding the possibility of cognition – the representation of objects in space and time (A320/B376-77, A58/B83, B737). A shared root of this problem is the characterization of the cognitive subject as disembodied and self-contained – whether the Humean subject whose impressions arise internally ‘from an unknown source’, or the Leibnizian subject who contains the entire universe within itself. The result is that the only resources available for an account of cognition are internal. For both, objects are construed as mental representations and any unity is defined by features which are internal to the mind. This means that they also deny that there can be necessary but non-logical relations

between these representations. Both Leibniz and Hume accept the unity of cognition, at least to the extent that we perceive objects and sequences of events. However, this unity is a feature that Leibniz and Hume cannot account for with their disembodied thinkers.

These two case studies suggest that a disembodied notion of the cognitive subject would only lead Kant to adopt these positions he is most concerned to reject. He therefore requires an alternative account to secure a distinction between experience and thought. Without this distinction, skepticism and solipsism looms. In subsequent chapters, we will consider Kant's responses to this threat to cognition. We will see that he provides an account of causal community, the reciprocal unity of material substances which interact according to the same laws. This necessary, yet non-logical, relation distinguishes the real world from merely imaginary aggregates. According to Kant, genuine cognition – reference to the real world – depends on the body putting us into causal community with the world of objects. Intentionality requires embodied participation in the world. His specific response to Leibniz will be that we can go beyond our existing concepts through sensibility – a separate avenue of cognition that Leibniz could never allow. Cognition is not just a matter of greater or lesser degrees of clarity or attention, and the distinction between sensibility and the intellectual is not 'merely logical' but rather a difference in 'origin and content' (B61-2/A44-5). Kant achieves this advance on Leibniz by resisting the reduction of the external to internal, arguing instead for genuine mutual interaction. Kant's response to Hume will be that the subject contributes to the structure of the world. This is something that Kant claims 'never occurred' to Hume (B127) – although I have suggested that Hume does reach towards this innovative step.

Consideration of these two case studies also explains why Kant is not explicit about the role of the body and its external community with the world, and instead seems more concerned with discussing the unity of cognition. Commentators on embodiment in Kant have tried to explain his reticence to mention the body in various ways – perhaps the fact of embodiment was so obvious that he did not need to mention it, or perhaps he simply was not aware of the implications of his own arguments for embodiment (Svare, 2006, pp. 151–153). My discussion of Kant's diagnosis of Hume and Leibniz suggests that Kant seeks to meet his rationalist and empiricist

predecessors on their own terms, showing that they need more to cognition than their resources allow. However, the very notions of causation, bodies and subjects are under threat after the double threat of rationalist idealism and empiricist skepticism. Therefore, Kant must lay theoretical foundations before he can openly talk about an embodied subject, beginning with features of cognition which seemingly make no reference to anything outside of the mind.

## 2.4. Conclusion

I have argued that Kant rejects the rationalist notion of the soul, along with the accompanying traditional questions of rationalist ontology. This allows him to defuse the rationalist problems regarding the body. He also raises new questions for the transcendental investigation of the conditions of the unity of cognition.

Consideration of the case studies of Leibniz and Hume demonstrates the close link between a disembodied notion of the cognizer and problems for the unity of cognition. Kant needs to steer between both extremes, and the reintroduction of the embodiment of the cognitive subject is part of how he will do so. In subsequent chapters, I will return to assessing Kant's progress relative to these two accounts.

Kant points the way to the development of a better characterization of the subject – not as an immaterial thinker, but rather as a perceiver standing in embodied relations to the external world. My task now is to fill in the details of this account.

## Chapter 3

### Embodiment, synthesis, and intentionality

This chapter examines the role of the body in cognition in general, focusing on Kant's account of the synthesis required for cognition. The first part of this chapter establishes the general framework for the role of the body in cognition. I begin by considering the tension between Kant's claims about the mereology of space and time. According to Kant, space and time are infinitely divisible, yet are represented as a sequence of moments of absolute unity. I suggest that this puzzling mereology can be explained in terms of bodily activity. The cognitive subject organizes her sensory reactions in space and time in the course of a single bodily action, resulting in a representation of a determinate spatio-temporal extent. I suggest that this role for bodily activity provides the answer to the question of how intentionality is possible. The understanding provides rules which govern bodily activity, but it is the enactment of those rules through bodily activity that establishes an immediate cognitive relation between the cognitive subject and the sensible object. The second part of the chapter defends my reading in the face of Kant's emphasis on the pure and the *a priori* in his account of spatio-temporal representation. I suggest that Kant's account of bodily activity extends to the *a priori* representation of space in geometry. For geometry to refer to space at all, it must refer to bodily activity. However, I show that there is a remaining tension between the spontaneity of the understanding, and the causal nature of bodily activity. Kant needs the causality of the cognitive subject for his account of intentionality, but a full account of how causal activity comes under the rules of the understanding remains to be provided.

#### 3.1. Introduction

Kant famously distinguishes between two 'stems' of cognition: sensibility, and the understanding. Sensibility is the receptive capacity to be affected by objects, through which 'objects are given to us' according to the forms of space and time (A15/B29).

The understanding is the capacity by which concepts are formed and objects ‘are thought’ (*ibid.*). A related distinction can be drawn between two kinds of representations: intuitions and thoughts. An intuition is a singular representation which relates the perceiving subject immediately to an object, whereas a thought is a general representation, involving concepts which refer to objects ‘mediately, by means of a mark [...] common to several things’ (A320/B377). How do these two very different stems interact to combine the two different kinds of representation, thereby providing cognition?

This question regarding the combination of sensibility and the understanding is another way of stating the Problem of Intentionality: how is the representation of spatio-temporal objects possible? Kant claims that both stems must come together in order for representation to be possible. This is summed up by his famous statement: ‘Thoughts without content are empty, intuitions without concepts are blind’ (A51/B75). On the one hand, Kant’s specification of an active contribution from the understanding expresses his commitment to showing that representation is not just reactivity. An example of mere reactivity would be the changes in levels of mercury in a barometer according to variation in atmospheric pressure. I can use a barometer to represent changes in the atmosphere, but the barometer does not represent anything to itself – it is ‘blind’.<sup>20</sup> A significant difference between me and the barometer is that I can represent something which is not currently affecting me, such as thinking about the cold weather last week. On the other hand, Kant’s characterization of sensibility as receptive expresses his commitment to the openness of human cognition to spatio-temporal objects, such that these objects do not reduce to merely inner objects in the mind. I can represent objects even though I do not produce them. Without receptivity, my representations would be ‘empty’. Both stems together mean that I *represent* rather than just react, and I represent *spatio-temporal objects* rather than just producing states in my own mind. I have thoughts and sensible perceptions of dogs, houses, ships, and so on.

If Kant can answer the question regarding how sensibility and the understanding combine, he should also have a solution to the Problem of Intentionality. This question

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<sup>20</sup> For a helpful spelling out of this contrast between reactivity and representation, see Evans (2017, p. 43).

of combination is therefore prior to the issue of whether cognitive claims (judgments) are true or false of objects thereby represented, or whether there is justification for knowledge about those objects.

There is a vast literature on Kant's account of the combination of the two stems of cognition.<sup>21</sup> I will focus on the specific question of how embodiment comes into his account. By way of introduction, I want to sketch some of the interpretative background for my exploration of the role of the body in cognition.

Why talk about embodiment at all? My starting point is that we have good reason to interpret the contribution of sensibility to cognition in embodied terms. The claim about the immediate and singular representations of sensibility can be understood in terms of our access to objects through our bodily organs. When an object is literally before our eyes or within the grasp of our hands, we immediately refer to that object, and that object alone. By contrast, the understanding only provides reference to objects by means of a general description, consisting of a set of features, which may well be satisfied by many other objects. Furthermore, we can interpret the provision of the forms of space and time through sensibility in embodied terms. We relate to objects from our embodied perspective on the here and now. Every exercise of the embodied capacity of sensibility will result in objects which exhibit spatial and temporal order in relation to this perspective. It is not clear how to distinguish sensibility and its forms of space and time from the conceptual capacities of the understanding, except in terms of embodiment.

As further evidence that embodiment has a role to play, commentators such as Bennett, Longuenesse, and Kitcher have made tantalizing comparisons between bodily activity, and the combination required for cognition:

Kant thinks [...] that imagination plays a vital mediatory role in the application of concepts to data because it is active like the understanding, yet like sensibility it deals in intuitions. But does not physical activity also have a foot in each camp? In carpentering and walking and blinking we actively bring about changes in our sensory states. The making of chairs, then, has the same

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<sup>21</sup> For recent overviews of the literature, see McLearn (2014) and Allais (2016).



double virtue as the imaging of chairs, namely that it is an activity which results in the occurrence of intuitions. Yet schema are said to be rules for the production, specifically, of images. (Bennett, 1966, p. 143)

A relevant analogy might be: when I follow with a stick the outline of a drawing on the ground, the figure I draw (the form of my drawing) and the figure out there (the form of the drawn) are one and the same. The line out there is literally the meeting point between my own action and the resistance of the ground. (Longuenesse, 1998, p. 218, fn. 12).

Kant takes perception to involve something like scanning the contours and boundaries of perceived objects. We perceive when we draw a line around the object's boundaries and other salient geometrical features with our mind's eye. [...] With some trepidation, I will describe this model of perception in terms of [...] "scanning the visible contours of an object represented in an image." (We don't see—*a fortiori*, we don't scan—our perceptual images themselves.) (Kitcher, 1990, p. 157)

Bennett, Kitcher, and Longuenesse compare the active-passive facets of combination to similar aspects of bodily activity. The body is passive, being affected by and adjusting to the edges, textures, and weight of the objects it encounters. It is also active, producing figures in space and bringing about changes in sensory states. In a single bodily action, both aspects come together.

These are all very tentative suggestions, but they give us reason to believe that Kant points in the direction of embodiment in his account of cognition. There is even a hint that part of the solution to the Problem of Intentionality lies in the immediate active-passive relation that we have to objects through the activity of the body.

However, an appeal to embodiment is by no means the usual direction for interpretations of Kant's theory of cognition. Indeed, Bennett, Kitcher, and Longuenesse immediately dismiss any role for bodily activity in Kant's account. They claim that the combination required for cognition occurs 'in the mind's eye', rather than through bodily activity. There are several interrelated issues in the interpretative background that complicate the task of putting the body into the theoretical picture.

First, Kant puts his answer to the question of the combination required for cognition in terms of the notion of ‘synthesis’, defined in the A-Deduction<sup>22</sup> as ‘the action of putting different representations together with each other and comprehending their manifoldness in one cognition’ (A77/B103). He ascribes synthesis to the imagination (A77/B103). The imagination plays a mediating role between the two stems of cognition, bringing their contributions together. Exactly how the imagination achieves this is far from clear, with Kant oscillating between treating the imagination as belonging to sensibility (e.g. B151) and belonging to the understanding (e.g. B161, B130).

Second, a major debate regarding the combination of sensibility and the understanding has tended to proceed without any reference to the body – the dispute between conceptualist and non-conceptualist interpretations of Kant. The value of this debate for my purposes is that it brings out apparently conflicting lines of argument in Kant’s account of the combination required for cognition.<sup>23</sup> On the conceptualist side, the claim is that the representation of spatio-temporal particulars requires synthesis through the conceptual capacities of the understanding. Conceptualism has strong textual motivation, given Kant’s overarching argument in the Transcendental Analytic section of *KrV*, particularly the Transcendental Deduction. He aims to show that all objects of intuition must fall under the categories of the understanding (see e.g. Allison, 2004, p. 162; Gomes, 2014; Land, 2011; Longuenesse, 1998, p. 213). This line of argument is particularly important because it is Kant’s response to the

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<sup>22</sup> I follow convention in calling the first and second edition versions of the Transcendental Deduction the ‘A-Deduction’ and ‘B-Deduction’.

<sup>23</sup> The conceptualist/non-conceptualist debate in the Kantian context has been formulated in different ways, such as what specific concepts may be involved in representation, and whether the structure and content of intuitions differ from conceptual presentations. I follow Allais (2009, p. 386) and Golob (2014, p. 505, fn. 2) in focusing on ‘relative’ rather than ‘absolute’ non-conceptualism, a distinction employed by Speaks (2005). Absolute non-conceptualism is the claim that perception has a ‘different kind of content than do beliefs, thoughts, and so on’ (Speaks, 2005, p. 360). I will only discuss the relative non-conceptualist position, which seeks to remain neutral about whether or not the kind of content is the same or has the same structure. I will also not discuss modern conceptualist/non-conceptualist debates outside of the Kantian context (on similarities and differences, see Gomes, 2014).

empiricist attempt to derive intentionality from the affection of the senses alone. He wants to avoid the empiricist endpoint of the Humean dissolution of objects (see *Chapter 2* of this thesis). Kant's strategy is identify a source for intentionality in the understanding, which is in some way prior to sensible affection (Land, 2011, p. 205). Non-conceptualists have been forced to explain away this line of argument, either weakening Kant's conclusions (Allais, 2017) or claiming that they are incoherent (Hanna, 2011).

On the non-conceptualist side, there is motivation for interpreting synthesis as a function of sensibility (Hanna, 2005, 2011), or at least as independent of understanding (Allais, 2009). Part of this motivation comes from considerations of there being some distinctive, non-conceptual contribution of sensibility to intentionality. Commentators such as Allais (2016, p. 8), Gomes (2014, pp. 6–7), and McLear (2011, p. 14), have used the case of non-human animals to bring out Kant's commitment to a distinctive contribution of sensibility. According to Kant, non-human animals do not have the capacity of the understanding (A546/B574; *Anth.* 7: 196). Yet, he also claims that non-human animals have the capacity to consciously represent spatio-temporal particulars. For example, he comments that 'animals also act in accordance with representations and are not as Descartes would have it, machines' (*KU* 5: 464n). Even though animals are determined by natural laws, they have the capacity for representation – an ability which sets them apart from machines. Thus, Kant suggests that non-human animals can represent spatio-temporal particulars without having the capacity of the understanding. This casts doubt on the conceptualist position, which implies that the deployment of conceptual capacities is necessary for such representation.

Now that I have some of the background to Kant's theory of cognition in place, I can start the work of providing my account of the role of the body. In this chapter, I elaborate on and defend the claim that the activity of the body of the cognitive subject is necessary for the representation of objects in space and time. I abbreviate this claim as 'Embodied Synthesis'. I will use material from the Transcendental Aesthetic, the Transcendental Deduction, the Schematism, and the Analogies of Experience. Commentators have by no means reached a consensus on these sections, and it would not be productive to try to address every wider interpretative dispute. Instead, I focus

on how Embodied Synthesis presents a solution to the Problem of Intentionality that also allows us to reconsider the lines of argument that have led to the impasse between conceptualism and non-conceptualism. I will show that synthesis involves the activity of the construction and application of rules, which is the activity that conceptualists take to be necessary for cognition (Gomes, 2014, p. 4; Longuenesse, 1998, p. 63). But I argue that this cannot be the only activity performed by the cognitive subject. In order to refer to spatio-temporal objects, the cognitive subject must also have the capacity to enact rules through her bodily activity. I argue that Embodied Synthesis provides a compelling solution to the Problem of Intentionality that not only respects the anti-empiricist arguments of the Transcendental Analytic, but also preserves a distinctive, embodied contribution of sensibility to cognition.

The first part of this chapter introduces the general framework for Embodied Synthesis, articulating the role played by the capacity for bodily activity in cognition. The second part of this paper defends my reading in the face of Kant's emphasis on the pure and the *a priori* in his account of synthesis. I will wait until I have all the ingredients for Embodied Synthesis before I reassess the conceptualist debate at the end of the chapter.

Before proceeding with my account, I want to mention two commentators who also offer accounts of synthesis in terms of bodily activity. First, Melnick (1989) offers essentially the same answer to the Problem of Intentionality as my account of Embodied Synthesis. Nevertheless, the following reconstruction of how Kant gets to this solution is my own. This is because Melnick obscures the textual basis for Embodied Synthesis by his piecemeal approach to *KrV*, presenting three separate accounts of intentionality from various parts of the text. On my account, Embodied Synthesis is consistently presented across many sections and both editions of *KrV*. Second, Svare argues that synthesis is embodied activity (2006, Chapter 6). However, he puts this in terms of the claim that bodily activity is a schema. I think this unhelpfully obscures the difference between bodily activity and the rules that govern it, leading Svare to neglect the separate role of rules in Kant's account of intentionality. I argue instead that the Problem of Intentionality can only be solved if we take into account the cognitive subject's enactment of rules. Neither Svare nor Melnick consider

the background of interpretative debate about synthesis, so the framing of Embodied Synthesis against the issue of conceptualism is also my own.

## Part one: The framework for Embodied Synthesis

This first part of my chapter provides the general framework for the role of bodily activity in cognition. In §3.2, I show that Kant ascribes a puzzling mereology to the representation of objects in space and time. He claims that space and time are infinitely divisible, yet represented as a succession of moments of absolute unity. In §§3.2-3, I elaborate on Kant's claim that representation of space and time is neither given through sensations alone, nor thought through concepts alone. This leads me to pose a question in §3.4: what resources are left to account for the mereology of spatio-temporal representation? I claim that an answer is provided through an account of synthesis in terms of bodily activity. Bodily activity directs attention for the reception of sensation, allowing the subject to organize those sensations in the course of a single action in space and time. In §3.5, I explain that the understanding has the separate role of providing the rules which govern bodily activity. When bodily activity directs attention to receive affections in the correct way, an object is represented *as* that object. In §3.6, I bring these results together, showing that this provides an answer to the Problem of Intentionality. The understanding provides the rules for bodily activity, but it is bodily activity that establishes the immediate relationship between the cognitive subject and the sensible object.

### 3.2. The mereology of spatio-temporal representation

In the Transcendental Aesthetic, Kant describes space and time as forms belonging to sensibility, which 'lie ready [...] in the mind *a priori*' (A20/B34). In the Transcendental Deduction, he also claims that without synthesis 'we could have *a priori* neither the representations of space nor of time' (A99-100), and not 'even the purest and most fundamental representations of space and time' (A102). Kant therefore distinguishes between the forms of space and time, which 'merely gives the manifold', and the representation of space and time, which 'gives unity' (B160, note):

[T]he form of intuition merely gives the manifold, but the formal intuition gives unity of the representation. In the Aesthetic I ascribed this unity merely to sensibility, only in order to note that it precedes all concepts, though to be sure it presupposes a synthesis, which does not belong to the senses but through which all concepts of space and time first become possible. For since through it (as the understanding determines the sensibility) space or time are first given as intuitions, the unity of this *a priori* intuition belongs to space and time, and not to the concept of the understanding. (B160-1, note)

Kant admits that in the Transcendental Aesthetic, he ascribed the unity of the representation of space to sensibility. But he explains that he only did this to emphasize that it ‘precedes all concepts’. In fact, this unification is only possible through synthesis. Any representation of space and time, hence any representation of an object in space and time, depends on synthesis.

Kant’s claim that space and time are forms of sensibility, yet also require synthesis for representation, raises a problem regarding mereology. To formulate this problem, I will consider existing discussions of Kant’s mereology in Beck (1978), Van Cleve (1999), and Golob (2014). Beck (1978, p. 144) and Van Cleve (1999, p. 279) separately accuse Kant of ‘sensational atomism’, the claim that we ‘scan the visual field’ point by point. For example, Kant writes: ‘I cannot represent any line, no matter how small, without drawing it in thought, i.e. successively generating all the parts from one point [...]. It is exactly the same with even the smallest time’ (A162/B203). Beck and Van Cleve both respond by pointing out that we can take in objects like a line in a single glance – not by looking first at one part of it, then another, and so on. Their complaint is that Kant brings in his apparatus of synthesis to solve a problem of unity that is concocted out of a false claim about the nature of perception.

Golob further complicates the picture by noting that Kant ascribes to the infinite divisibility of space and time. As the forms of intuition, space and time are *quanta continua*: ‘no part of [space and time] is the smallest (no part is simple)’ (A169/B211). As space and time have infinitely many parts, any representation of space and time is divisible further into parts (Golob, 2014, p. 507). For example, I see a house as I walk towards it. Coming closer, I see the roof, then the slate tiles of the roof. When I come very close indeed, I see the grains of slate. It may be that the grains of slate were

included in my perception of the house from far away, but I didn't *see* them from that distance (at least, I was not conscious of them).

Golob, Beck, and Van Cleve discuss cases in which we seem to see something in one moment, rather than the full multitude of parts posited by Kant. We can see a house in a single moment, without first running through all its parts; we can see a roof without seeing the microscopic particles making it up. Taken together, these different cases suggest that the problem for Kant does not just lie in his claim that perception is always successive (i.e. that it is divisible through time). After all, Kant claims that the representation of a line in space is divisible into a sequence made up of single parts of the line, so he allows that we can see a single part of a line at once. There is still a further unity to be explained – the fact that I see a part of a line, rather than the microscopic points making it up. Thus, Kant ascribes a puzzling combination of unity and division to the representation of space and time. He claims that space and time are infinitely divisible, yet also determinable as a succession of unified parts. An account of synthesis will have to involve an explanation of this combination of features.

### 3.3. Ruling out sensations and concepts

Kant rules out two options for the provision of the mereological integration of space and time: through sensation, and through concepts. I will run through his reasons for rejecting these options before addressing how synthesis solves the problem instead.

#### 3.3.1. Sensations

Kant claims that the unity required for the representation of space and time does not 'belong to the senses' (B160-1, note). Neither the manifold of intuition, nor the modes of being affected through the senses, are sufficient for the unifying task.

According to Kant, the manifold of intuition comes about through 'receptivity', the passive capacity of sensibility to receive sense impressions through the affection

of objects (A51/B75).<sup>24</sup> Kant consistently writes of this affection in causal terms, writing of sensations which arise ‘through the influence of external things or as the effect of inner causes’ (A98). He defines sensation as the ‘effect of an object on the capacity for representation, insofar as we are affected by it’ (A19/B34). In the *Anticipations of Perception*, he similarly ascribes ‘a degree of influence on sense’ to objects, tentatively writing of objects as the ‘cause’ of sensation (B208-10).<sup>25</sup> This leads to the following interpretation of the manifold of intuition. The manifold consists in whatever is received by sense organs through causal influence. This consists in sensations, which are bodily reactions such as: the firing of neurons in response to the reflection of light off the fur of a dog, or the vibrations of the eardrum when a dog barks. These reactions are the material for representations, although not all of them will be relevant for specific representations. For example, not everything that occurs in my body when a dog jumps in front of me will be relevant to my sensible representation of that dog.

The important point for our purposes is that sensation is non-representational. Kant writes that ‘[S]ensation in itself is not an objective representation, and in it neither the intuition of space nor that of time is to be encountered’ (B208). The transition to representation requires sensation to be ‘combined with consciousness’ through synthesis (A120; see also A320/B376). Sensation on its own is not conscious, so it cannot constitute consciousness *of* anything, let alone objects in space and time. Kant puts the same point in a different way when he writes that sensation ‘relates solely to the subject as the modification of its state’ (A320/B377). This may at first seem to contradict his claim that sensation involves a relation to the object of representation. This appearance of contradiction can be cleared up by considering the relation of sensation to the object as a causal, rather than intentional, relation. Sensation is a

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<sup>24</sup> I use sensation (*Empfindung*) and sense impression (*Eindruck*) interchangeably, but this reflects Kant’s usage (Horstmann, 2018, p. 14, fn.15).

<sup>25</sup> Admittedly, Kant cuts himself off in discussing whether sensation is causal, commenting that ‘at present I am not yet dealing with causality’ (A168/B210). I suggest that his reticence is due to the fact that he has not yet given his account of causation in *KrV*. He still intends to affirm that sensation is the result of the affection of an object. This is supported by his characterization of impressions as physiological states in his *Anthropology* (*Anth.* 7: 176), a context where causation is not under question (see Horstmann, 2018, p. 14).



modification of the subject's states as a result of causal influence of an object. It does not constitute consciousness of any object, not even of the subject itself. No object can be considered as the cause of sensation with the resources of sensation alone. Some further action is required to bring about conscious representation.

Kant provides systematic reasons for his distinction between sensation and representation in the *Transcendental Aesthetic*. There, he argues that space is empirically real 'in regard to everything that can come before us externally as an object' (A27-8/B43-4). To describe the contrast case, an empirically *ideal* space would be one which consists in sensations, such as the kinesthetic feeling of the eyes in their sockets or the end of one's finger. Instead of seeing and touching an object, we would encounter only a veil of bodily sensations. We would either need to make an inference from sensations to form a concept of an object as their cause, or else accept that bodies are nothing but sensations. These are claims that Kant accuses Descartes and Berkeley of making respectively (B71; B274). Kant instead claims that space is empirically real. The spatial representation is the representation of something outside our own inner states. Thus, he distinguishes between sensation and spatial representation. Bodily sensations differ internally, but this felt difference is not equivalent to the representation of objects (even sensations themselves) in different spatio-temporal positions: 'in order for me to represent [sensations] as outside one another, thus not merely as different but as in different places, the representation of space must already be their ground' (A23/B38). Say that we have two sensations, <red> and <heavy>. Kant allows that these sensations are qualitatively different. We could even have sensations with qualitative spatiality or temporality, such as: <red, expect heavy>. But these qualitative elements are just more sensations. They do not serve to structure sensations in relation to each other, so that we represent <heavy> and <red> here and now in a piece of cinnabar (see A100). Kant therefore rules out the indexing of sensations in relation to each other through sensations alone. Sensations can feel the same or different, but they cannot represent unity or difference in time and space.

This reading of Kant's notion of sensation can be defended in the face of his unhelpful use of terminology. In the famous 'Stufenleiter' passage (A320/B376), he defines perception as 'representation with consciousness'. He then defines sensation as 'a perception that refers to the subject as a modification of its state'. So, it seems

that sensation is a conscious representation, which seems to contradict the claim that '[S]ensation in itself is not an objective representation' (B208). Nevertheless, we have seen that Kant accepts that sensation can be combined with consciousness through synthesis. The manifold of intuition is non-representational, but when attention is directed towards sensations, they can be represented as states of the subject. This is enough to defuse the tension in Kant's characterization of sensation, although there is a remaining question. Kant does not seem to be referring to awareness of states of the body, such as aches and itches. Instead, he seems to refer to the representation of mental states. I will return to this issue of empirical self-consciousness at the end of this chapter.

Kant's account of sensation feeds into the set-up of the Problem of Intentionality – specifically, the claim that 'intuitions without concepts are blind' (A51/B75). One reason to bring in an active aspect to cognition is that otherwise there is no account of the distinction between representation and reactivity. If human cognition is to be distinguished from the blind reactivity of machines, then cognition must be more than just sensations. Thus, the manifold of intuition is only given the status of the matter (*Stoff*) of synthesis.

To sum up, sensations are passively received bodily reactions. They provide the manifold of intuition, but do not constitute any representation of objects in space and time. Thus, the solution to the problem of the mereology of space and time is not to be found in Kant's account of sensation.

### 3.3.2. Concepts

Kant claims that 'all concepts of space and time first become possible' through synthesis (B161, note). In both editions of the Deduction, Kant consistently claims that the representation of space and time comes prior to forming concepts of space and time. In the B-Deduction, Kant distinguishes between figurative synthesis (*synthesis speciosa*) and intellectual synthesis (*synthesis intellectualis*):

This synthesis of the manifold of sensible intuition, which is possible and necessary a priori, can be called figurative (*synthesis speciosa*), as distinct from that which would be thought in the mere category in regard to the

manifold of an intuition in general, and which is called combination of the understanding (*synthesis intellectualis*); both are transcendental, not merely because they themselves proceed *a priori* but also because they ground the possibility of other cognition *a priori*. (B151)

Kant defines figurative synthesis as a transcendental synthesis of the imagination which organizes the sensible manifold. He distinguishes figurative synthesis from intellectual synthesis, which is the ‘combination of the understanding’. As concepts belong to the understanding, figurative synthesis can be understood as synthesis which does not involve the deployment of concepts.

In the A-Deduction, this distinction between two kinds of synthesis is made in more detail. Kant writes of a ‘threefold synthesis’ of ‘the apprehension of the representations, as modifications of the mind in intuition; of the reproduction of them in the imagination; and of their recognition in the concept’ (A97). I take it that ‘figurative synthesis’ in the B-Deduction summarizes the first two modes of synthesis which do not involve the deployment of concepts.<sup>26</sup> This is reflected in Kant’s claims that the first two modes of synthesis provide the determination of space and time. Kant claims that the synthesis of apprehension brings the manifold of intuition together into singular ‘representation of space’ corresponding to ‘one moment’ in time (A99). Kant claims that without the synthesis of apprehension, ‘we could have *a priori* neither the representations of space nor of time’ (A99-100). Second, the synthesis of reproduction (A100ff.) arranges the singular apprehended units in a temporal sequence, with Kant claiming that this is necessary for ‘even the purest and most fundamental representations of space and time’ (A102). Kant’s account of synthesis of apprehension and reproduction is comparable to his notion of figurative synthesis. Thus, Kant makes a clear distinction between apprehension and reproduction on the one side, which provide the representation of space and time, and synthesis involving

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<sup>26</sup> I suggest that the two versions have a different emphasis, but offer the same account. The A-Deduction focuses on the transition from the manifold of intuition to intuition, whereas the B-Deduction focuses on the transition from intuition to judgment via its subsumption under concepts (for a reading which offers a similar division, see Horstmann, 2018).

concepts on the other. For now, I focus on this separable<sup>27</sup> role for these two modes of synthesis, leaving a discussion of the contribution of concepts to cognition until later.

The background to Kant's distinction between concepts, and space and time themselves, can be found in the *Transcendental Aesthetic*. Regarding space, Kant writes:

Space is not a discursive or, as is said, general concept of relations of things in general, but a pure intuition. For, first, one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space. And these parts cannot as it were precede the single all-encompassing space as its components (from which its composition would be possible), but rather are only thought in it. It is essentially single; the manifold in it, thus also the general concept of spaces in general, rests merely on limitations. [...]

Space is represented as a given infinite magnitude. A general concept of space [...] can determine nothing in respect to magnitude. If there were not boundlessness in the progress of intuition, no concept of relations could bring with it a principle of their infinity. (A25/41)

In these two very condensed paragraphs, Kant contrasts the mereology of concepts and the mereology of the representation of space. According to Kant, a concept is a general representation of the marks exhibited by objects falling under that concept (A68/B93). For example, the concept <dog> includes the concepts of <four-footed>, <animal>, and so on. In the first argument, Kant notes that the (intensional) parts of the concept <dog> can be represented prior to the representation of the whole concept <dog> – we can think of a four-footed object without thinking of a dog. By contrast, we cannot represent any part of space without representing space itself. In the second argument, Kant notes that a concept can be represented through each of its parts – in representing <four-footed>, <animal>, (and so on), we represent <dog>. By contrast, we can never

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<sup>27</sup> I do not mean that the threefold synthesis occurs in three separate temporal stages, but rather that the first two modes have a different role to the third.

represent space through the collection of its common parts. This is because space has an infinite number of parts. Thus, Kant claims that the mereological structure of concepts is completely different to our representations of space and time. We must first have an immediate representation of a single space, before we can represent any of its parts.

Of course, we can have concepts of space and time. Kant's point is that space and time are not themselves concepts. Moreover, the content of any concepts of space and time cannot be given through further concepts. Kant's discussion of concepts therefore feeds into the set-up of the Problem of Intentionality and the claim that 'thought without content are empty' (A51/B75). Representing space and time is not the same as producing concepts from my own mind. Thus, the solution to the problem of the mereology of space and time is not to be found in conceptual capacities alone.

### 3.4. Bodily activity

In §3.2, I used considerations from Golob, Beck and Van Cleve to suggest that space and time are at once infinitely divisible, yet also determinable as a succession of units. In §3.3, I showed that Kant claims that space and time are determined neither through sensations nor concepts alone. The question is: what resources are left to account for the mereology of the representation of space and time? It may seem that we have exhausted our cognitive resources. I suggest that the mystery of the mereology of space and time can be dispelled by uncovering an active aspect of sensibility. This can be achieved by interpreting Kant's notion of synthesis in terms of bodily activity. To show how Embodied Synthesis is a solution to the problem of mereology for Kant, I take a closer look at his account of threefold synthesis in the A-Deduction. I first explain the absolute unity provided by synthesis, and then the sequence of moments provided by synthesis.

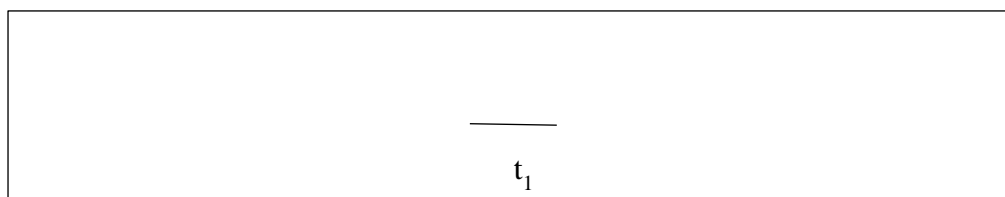
#### 3.4.1. Synthesis of apprehension: absolute unity

Kant describes the first mode of the threefold synthesis, the synthesis of apprehension, as follows:

[A]s contained in one moment no representation can ever be anything other than absolute unity. Now in order for unity of intuition to come from this manifold (as, say, in the representation of space), it is necessary first to run through and then to take together this manifoldness [...] as contained in one representation. (A99)

Synthesis of apprehension produces a single unit, ‘one representation’, which corresponds to the ‘representation of space’ in ‘one moment’ in time. In this subsection, I suggest that synthesis of apprehension consists in a single bodily action which directs attention for sensory reactions. My initial reason for this reading, which I expand upon throughout this chapter, is that bodily activity results in exactly the mereological structure which Kant attributes to spatio-temporal representation. The manifold of intuition consists in the innumerable bodily sensations which occur during this action. A bodily action produces an absolutely unified, yet infinitely divisible, structure to the sensations which occur during it.

To give a simple example, say that I point out a side of a triangle with my finger. My attention shifts from one end of the line to the other, such that I react <black>. The perceptual content produced by this action is illustrated below – it is the determinate spatial extent of a line, which I have labelled  $t_1$  to signal that it occurs in the course of a single action:



*Figure 1: Apprehension*

Bodily action directs attention to a single unified space in one moment. This provides ‘absolute unity’ in a moment. My finger starts and ends at two determinate points, but between these two points it is a continuous action. I direct my attention towards a spatio-temporal region rather than any intermediate points, even though I receive myriad causal affects before, during, and after this action. The manifold of intuition is passively received by the body during this action, but it is the action of the finger that

allows me to arrange what is received into a single spatio-temporal unit, as depicted in the figure above. This unit inherits the mereological features of the action. The action itself is continuous and undivided, but once the action of pointing has been performed, I can divide the region into infinitely many smaller segments.

Two clarificatory points help me to expand on this simple example. The first clarification is to define my notion of ‘attention’. I suggest that attention is a strong degree of consciousness. Kant suggests that there are degrees of consciousness in several places in *KrV*. He writes of ‘obscure’ (*dunkle*) representations which are ‘not sufficient for memory’ (B414-5, note), of diminishing consciousness to a minimal point (A175/B217), and of a broad notion of consciousness which ‘is not even a representation distinguishing a particular object’ (A346/B404). To explain his notion of obscure representation, Kant uses an example of a musician doing rapid improvisation. He claims that the musician cannot be attending to every action his fingers are making, but still needs to be conscious of the distinctions between the notes in order to produce music. He suggests that the musician is only ‘obscurely’, or weakly, conscious of all these distinctions, which is reflected by the fact that the musician cannot remember the distinctions between the notes after he has finished playing. In light of this illustration, I want to clarify that bodily activity directs strong consciousness, which is what I will call ‘attention’. Weak consciousness encompasses those conscious elements which lie beyond the focus of our attention during our bodily activity. In directing attention to a spatial unit through bodily activity, I am also minimally conscious of the miniscule parts making up that unit, which would be anything that intermediary actions could exhibit.

A second clarification is that synthesis of apprehension is not equivalent to paying attention to the bodily activity itself, such as the feeling of my finger. This would result in an account of cognition that renders space empirically ideal, with a veil of bodily sensations standing between the cognitive subject and objects in space. As I explained in §3.3.1, Kant rules out any sensation-based account of the representation of space. Instead, he claims that we are usually not conscious of the activity of synthesis – it is ‘a blind though indispensable function [...] without which we would have no cognition at all, but of which we are seldom even conscious’ (A78/B103). There would be no such activity as exhibiting or pointing if I were only conscious of my own sense

organs. The action of the finger serves to direct attention so that I react to something outside the finger, without my being anything more than obscurely conscious of the finger.

Bodily activity directs attention for sensory reactions, exhibiting a unified spatial unit in one moment. This is how synthesis of apprehension delivers absolute unity in a moment. Bodily activity is continuous and not in fact divided, even though resulting spatial unit which it exhibits is divisible.

### 3.4.2. Synthesis of reproduction: moments in sequence

Why is there a series of apprehended units? I suggest that consideration of bodily activity provides the answer. Writing about the second mode of the threefold synthesis, Kant describes a series of units, each accompanied by a reproduction of the previous units:

[I]f I were always to lose the preceding representations ([...] the preceding parts of time, or the successively presented units) from my thoughts and not reproduce them when I proceed to the following ones, then no whole representation, not even the purest and most fundamental representations of space and time, could ever arise. (A102).

Kant claims that for apprehended units to be arranged sequentially, they need to be put into relation with each other. Having three units is not the same as having a first, second, and third unit. Each unit needs to be ‘the next’ unit, coming after a previous unit of the same kind. As one moment passes to the next, it is reproduced to form a sequence of units. The bringing together of apprehended units into a temporal sequence is the work of the synthesis of reproduction. I suggest that the body is at work in this synthesis in two ways.

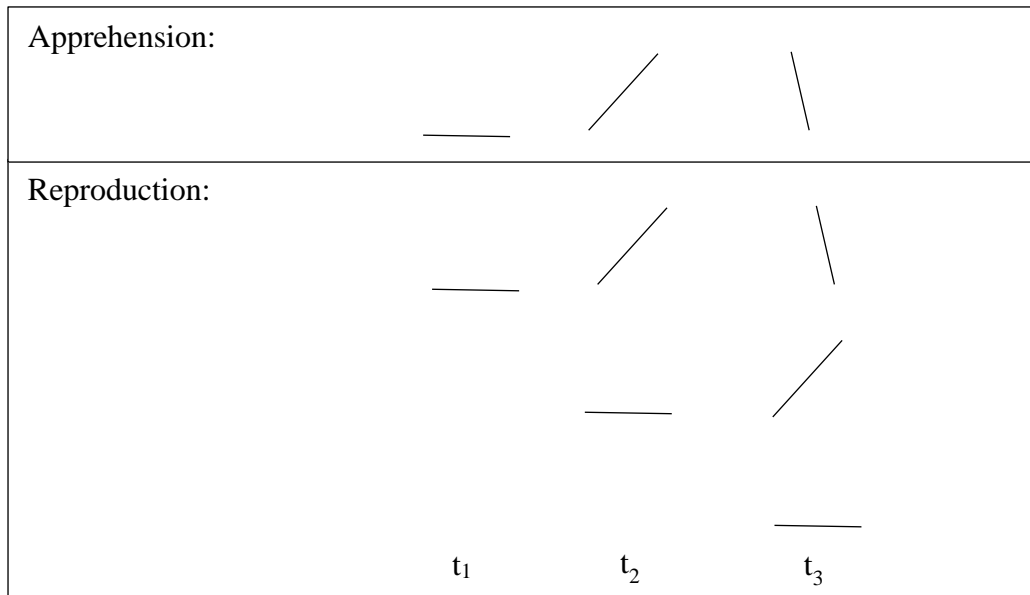
First, bodily activity generates different apprehended units. In the same bodily action that directs my attention to a region of space, I can either act so as to continue having sensory reactions, or act to interrupt my reactions. Going back to my example, in a single action I point out one side of the triangle. I can hold my finger to the line, prolonging the sensory reaction <black>. I can also take my finger away from the line. This interrupts my attention, cutting short this sensory reaction. The case of interrupted



attention reveals why we have more than one unit of apprehension. Although we can take in an absolutely unified spatial region at once through a single action, there is a limit to the span of our attention. This could be a bodily limit, such as not being able to take in a very big spatial region in a single gesture. It could also be a limit of interest, such as getting bored and stopping the action which was directing our attention. In either case, we interrupt present actions to perform other actions. Thus, we direct our attention part by part through bodily activity, generating several moments of absolute unity.

Second, bodily activity brings together momentary units into a temporal sequence. Each momentary unit is the same kind of unit, by virtue of being produced through bodily activity. This means that we can count units according to the order of our actions. When I perform the first action, I count it as coming first, having not yet performed any others. When I perform another action, the first action is reproduced, so that I count this as coming second. When the first two actions are reproduced alongside a further action, I count this as coming third. Just as in the case of space, time is not a sensation. It is not a qualitative temporality such as a feeling of expectation. Instead, time is determined by bodily activity which directs attention prior to any sensory reactions.

The following is an illustration of the work of reproduction in the case of pointing out each of the sides of a triangle in turn. Three actions delineate the three sides of the triangle, with the resulting perceptual contents illustrated in the Apprehension box. As each unit is apprehended, it is also reproduced through synthesis. This is illustrated by the line segments in the Reproduction box. I should clarify that the placement of the apprehended and reproduced units is not meant to represent their spatial position relative to each other, but only the temporal sequence in which the perceptual contents are produced and reproduced.



*Figure 2: Reproduction*

The reproduction of the first unit allows us to order the second unit as coming second, because it comes after the first unit. Similarly, the reproduction of the first two units allows us to order the next unit as the third unit. The three units are placed in a temporal sequence: <line > at  $t_1$ , <line > at  $t_2$ , <line > at  $t_3$ . To make an analogy, the difference between the syntheses of apprehension and reproduction is like the difference between being given a stack of single frames cut out from a movie, and arranging those single frames in a movie reel.

Kant allows that cognitive reproductive capacities are causally-determined: ‘there exists a subjective ground which leads the mind to reinstate a preceding perception alongside the subsequent perception to which it has passed, and so to form whole series of perceptions[...] this is the reproductive faculty of imagination, which is merely empirical’ (A121). The synthesis of reproduction is ‘merely empirical’ and proceeds on a ‘subjective ground’. This indicates that the syntheses of apprehension and reproduction may occur through physiological habit, with the cognitive subject being prone to act in such a way as to direct attention to a certain spatio-temporal determination. The organization of units into a temporal sequence depends on the order of bodily actions which produce each apprehended unit. For example, a lioness’ biologically determined behavior directs her attention towards wildebeest-sized

spatial regions, such that she reacts to these regions. The result is the regular behavior of hunting in response to the manifold of intuition she receives.

Bodily activity directs attention in parts, generating several moments of absolute unity. When actions are reproduced alongside a present action, I count this present action as coming after the previous ones. This allows me to organise the manifold of intuition as a sequence of apprehended spatial units. In other words, the synthesis of reproduction presents a temporal sequence.

### 3.4.3. Solving the problem of mereology

Let me review what we have seen of Kant's account of spatio-temporal representation so far. I began with Kant's claim that spatio-temporal representation requires synthesis. Although space and time are infinitely divisible, objects in space and time are represented as a succession of moments of absolute unity. The problem was that Kant's attribution of unity and divisibility to the representation of space and time seems mysterious. As Van Cleve, Beck, and Golob ask in different ways: why can't we see something at once, rather than generating it part by part?

I suggest that bodily activity directs attention in such a way as to produce a representation with exactly the same mereological features that Kant attributes to the representation of space and time. The body is involved in producing this representation in three distinct ways. First, as is commonly acknowledged, the body is causally receptive, with physiological reactions constituting the manifold of intuition. Second, the cognitive subject directs her attention through bodily activity – this is the innovative part of my reading. Third, the body provides the physiological basis for cognitive reproductive capacities, through which apprehended units are reproduced according to associations between them. Like the first aspect, this third aspect is more commonly acknowledged.

The second role for the body is the most important, as this constitutes my claim of Embodied Synthesis. According to Embodied Synthesis, the cognitive subject relies on bodily activity to direct and hold attention, ordering the reactions that occur during this activity in space and time. I have used the example of pointing with a finger. But

bodily activity can include everything from the eyes to the movement of the whole body.

The active role of the body in cognition explains why we can see a spatial region at once through a single action, even though the action itself is infinitely divisible. When attention is directed through a single bodily action, we determine a unit of space, which constitutes seeing something at once. Kant calls the result of this synthesis an ‘image’ or an ‘intuition’, a singular representation of spatio-temporally structured features (A51/B75f.). What we have seen so far is Kant’s account of the bodily activity by which imaginative production (equivalently, image-forming) takes place.

The direction of attention through bodily activity also explains the successive nature of apprehension. There are bodily limits to how much we can attend to in a single action, depending on the size, position, and strength of bodily organs. These limits explain Kant’s commitment to the successive determination of space and time. As we interrupt actions to perform other actions, we generate different apprehended units. This series of actions can be ordered and reproduced so that we count the apprehended units as first, second, third, and so on. Thus, synthesis of reproduction is Kant’s account of the bodily action by which momentary spatio-temporal figures are arranged in a temporal sequence. Appearance is always successive – the successive units are just sometimes whole units (e.g. a triangle) rather than the lines or the points making them up. In my example of pointing out the sides of a triangle, the triangle is not apprehended at once. But apprehension could also deliver whole units rather than just parts of a figure, such that the triangle is apprehended at once.

Before moving on to apply this account to the Problem of Intentionality, I want to note the similarities between my solution to the problem of mereology and Golob’s account (2014, p. 510). Golob draws on Kant’s discussion of the basic measure in a section on magnitude in the *Critique of Judgment* (KU §26). Kant posits a limit on ‘the estimation of magnitude [...] in mere intuition (measured by eye)’, writing that ‘one must neither come too close to them nor be too far away’ (KU 5: 252). The difficulty for a spectator who is too close to an object is ‘the inadequacy of his imagination for presenting the ideas of a whole’ (KU 5: 252). Kant uses the example of looking at the pyramids in Egypt. Standing close to a pyramid, my intuition is limited to a few blocks of stone. If my eyes were much bigger or differently structured,

or if I stood further away, I would take in many more blocks. For example, many animals have a wider field of vision than humans. The position of my eyes matters, too – my visual field, for example, does not include what is behind my head. Kant explains all this in terms of a ‘basic measure’ of intuition, which ‘must consist simply in the fact that one can immediately grasp it’ (*KU* 5: 251). Golob connects the limit imposed by the basic measure to Kant’s claim in *KrV* that an individual intuition corresponds to ‘one moment’ in time through the synthesis of apprehension (A99). The basic measure concerns what is graspable in a single intuition, limiting instantaneous consciousness to a spatially demarcated component of the landscape. There is no awareness of anything smaller or bigger than the basic measure allows. Golob suggests that the spatial extent of the basic measure may be determined by causal factors which may be biological in nature. For example, a frog that catches flies with its tongue will have a different basic measure compared to mine.

My account can be seen as filling in the steps that Kant needs to take in *KrV* before he can appeal to biological considerations in his account in *KU*. Kant must first assign the cognitive subject the bodily capacity to act. He must explain the relationship between what the body does and what the cognitive subject represents. Otherwise, the movement and power of the sense organs would have no bearing on the mereology of cognition. It matters how we move around only because it is in the course of bodily activity that we arrange the manifold of intuition in space and time. My addition to Golob’s account is that the embodiment of the cognitive subject does not just consist in the causal passivity of sense organs, with the limits that these imply, but also the spatializing and temporalizing bodily activity which directs attention for sensory reactions.

### 3.5. Rule-governed bodily activity

I have addressed the problem of mereology, but my argument for Embodied Synthesis is incomplete. I have shown that the cognitive subject determines a particular spatio-temporal extent through bodily activity. However, I have not solved the Problem of Intentionality. As yet, there is no account of how bodily activity directs attention in such a way that spatio-temporal regions are represented *as* objects. This is reflected in

the fact that I have refrained from putting an image of a whole triangle in my illustrations. This was not done in order to deny that three lines can be seen in a single moment. Rather, I wanted to suggest that something more is needed in order to see these lines as a triangle.

What is missing? The first two modes of synthesis (apprehension and reproduction) unite each apprehended unit in itself to provide a singular intuition, which can then be reproduced to form a temporal sequence. In my example of successively pointing out the sides of a triangle, this means that I draw attention to a line, then the next line, then the next line. The resulting sequence does not constitute representation of the sides of a triangle. Even though each unit is reproduced through the imagination, this just adds more units to the series, rather than unifying the series as a whole. It still leaves ‘merely unruly heaps’ of representation (A121). According to Kant, the missing ingredient is the provision of a rule governing embodied activity – the required unity is provided when it ‘conforms to a rule’ (A121). This is provided by ‘synthesis of recognition in the concept’, the third mode of the threefold synthesis which unites apprehended units to each other (A103ff.). To bring out the contrast between the third mode of synthesis and the other two modes, we can compare two questions which Kant invokes synthesis to answer. The question answered by syntheses of apprehension and reproduction is: how is intuition possible? That is, how is it possible to have a singular spatio-temporal representation? The question answered by synthesis of recognition is: how is it possible to subsume intuited objects under concepts, such that we represent those objects as the kind of objects that they are?

Let me elaborate further on the question for synthesis of recognition. According to Kant, a concept is a general representation of the features exhibited by objects falling under that concept (A68/B93).<sup>28</sup> Concepts are rules in the sense that they govern the subsumption of intuitions under concepts. Intuitions should be subsumed under a concept when they exhibit the relevant features, and they fail to fall under that concept when they do not have those features. For example, the concept <triangle>, is the rule that whatever has all of the following marks can be subsumed under <triangle>: polygon, 3 sides, 3 enclosed angles, etc. Considering this account of

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<sup>28</sup> For more on Kant’s notion of concepts, see (Allison, 2004, p. 79; Guyer, 1987, p. 164; Longuenesse, 1998, p. 50).

concepts, the question for synthesis of recognition becomes: when does an intuition ‘conform’ to the rule of subsumption provided by a concept?

Kant’s answer involves the claim that each concept is associated with a schema. This is a very controversial step of Kant’s argument. In this section, I will first show that Embodied Synthesis allows us to tell a coherent story about the function of schemata.<sup>29</sup> I then compare my reading of the schemata to existing interpretations, explaining why we should think that they are rules governing bodily activity in particular.

Let us begin by looking at how Kant describes schemata. He claims that each schema corresponds to its concept in the following way: it is a ‘representation of a general procedure of the imagination for providing a concept with its image’ (A140/B179-180). He also writes that a schema is ‘a rule of the synthesis of the imagination with regard to pure shapes in space’; and ‘a rule for the determination of our intuition in accordance with some universal concept’ (A141/B180). From these descriptions, it appears that Kant is talking about the rules which govern the synthesis which produces spatio-temporal images (that is, intuitions). Schemata are rules which govern the synthesis which we have described in the previous subsection.

To spell out an example, say that I direct my attention through pointing out three sides of a triangle. Kant writes, ‘we think of a triangle as an object by being conscious of the composition of three straight lines in accordance with a rule according to which such an intuition can always be exhibited’ (A105). The concept of a triangle specifies the features an intuition must exhibit in order to be subsumed under that concept: 3 sides, 3 enclosed angles, etc. The schema of a triangle is the rule for a procedure which produces an intuition which has these features: draw three straight line in a plane, such that each line intersects with the other two.<sup>30</sup> Any intuition constructed according to

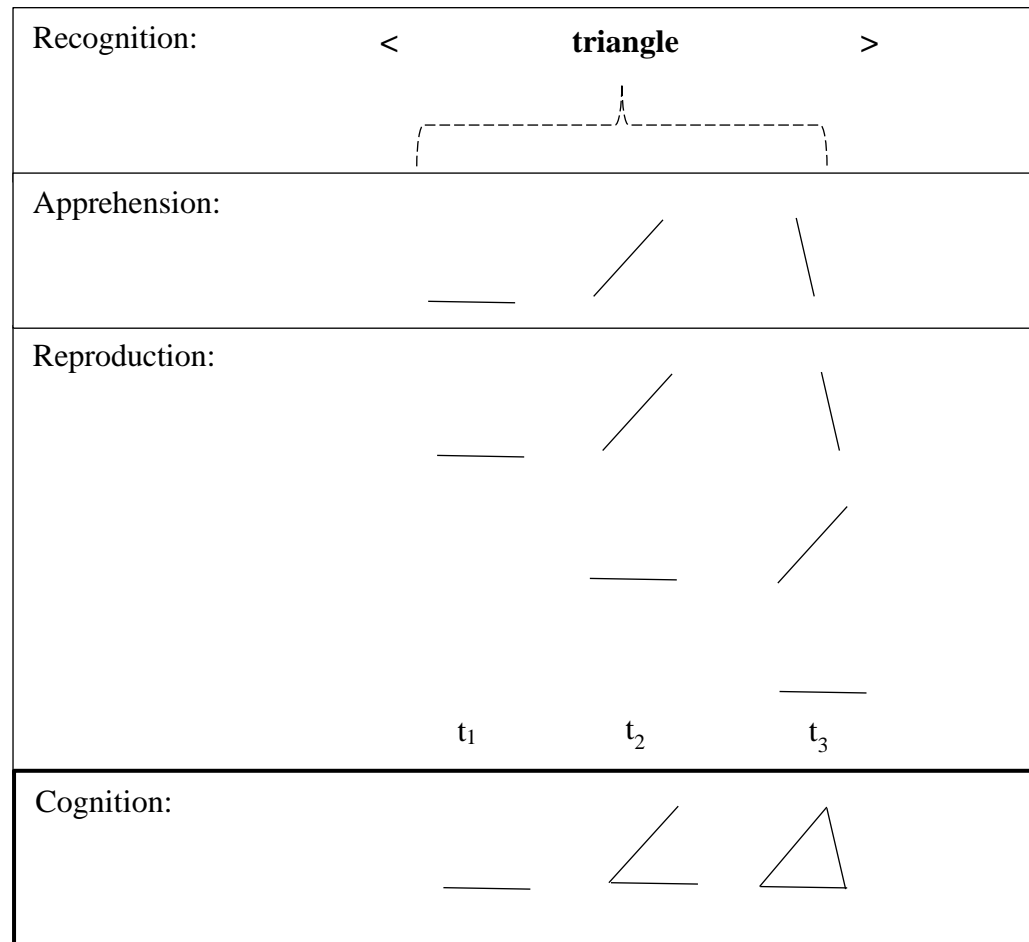
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<sup>29</sup> There is a wide range of positions on the Schematism chapter, with some suggesting that we should ignore it altogether (e.g. Wilkerson, 1976). Examples of influential commentators who have little to say about the Schematism include (Allais, 2009, 2017; Land, 2011, 2014; McDowell, 1994; McLear, 2015).

<sup>30</sup> This is a simplified account – Kant would have been familiar with a procedure specifying how to construct a triangle using a pair of compasses and a ruler.

this rule will always exhibit the features of a triangle. Thus, anything produced according to the schema of a triangle can be subsumed under the concept of a triangle.

The following is an illustration of the work of the schema:



*Figure 3: Recognition*

The concept <triangle> is associated with a schema, illustrated by the dotted bracket beneath it. Through bodily activity, the cognitive subject produces the units of apprehension, arranging them in time through synthesis of reproduction (as illustrated in the Apprehension and Reproduction boxes). Under the schema of a triangle, bodily activity is recognized as enacting the rule for producing an image of a triangle. The image produced is therefore subsumed under the concept of a triangle. As illustrated in the Cognition box, the lines are recognized as belonging together as parts of a triangle, rather than a sequence of disparate momentary units. The result is cognition of the sides of a triangle. To continue the movie analogy from the last section, rule-governed synthesis turns a succession of line units into a movie of drawing a triangle.



When the cognitive subject subsumes an intuition under the concept of a triangle, it is not that she compares the intuition to other images of triangles. Rather, she recognizes that she is enacting the general procedure for presenting an image of a triangle. The focus is on the procedure for acting, rather than the product. Thus, a schema connects concepts to intuitions in the following way. On one side, a schema relates to an intuition by governing the bodily activity that leads to its production. On the other side, a schema relates to a concept as a procedure which can be recognized as producing images which fall under that concept.

To expand this account beyond the simple case of a triangle, we can consider Kant's other examples of empirical representation. He writes about perceiving a dog:

The concept of a dog signifies a rule in accordance with which my imagination can specify the shape of a four-footed animal in general, without being restricted to any single particular shape that experience offers me or any possible image that I can exhibit in concreto. (A141/B180)

Kant claims that it is in 'specifying' the shape of the dog that we recognize it as a dog. My suggestion is that he is referring to the bodily activity which directs attention so as to arrange sensory reactions in the shape of the dog. In performing this activity, whether it is a movement of the eyes or the fingers around the dog, a procedure is performed which is governed by the rule which produces images of dogs (i.e. it is what one has to do in order to produce an image of a dog). The apprehended units can therefore be recognized as parts of a dog.

At this point, I want to consider an objection to expanding Kant's account to empirical objects such as dogs. While it is plausible that there is only one shape for a triangle to be, dogs come in many different shapes. Moreover, it takes more than being a specific shape to be a dog. Thus, it does not seem to be the case that an empirical object can be identified on the basis of a procedure which produces its shape alone.

Svare offers a response to this objection. Kant is not explaining how objects satisfy all the various marks of a concept, but only those marks which relate 'to the spatial and temporal form of objects' (2006, p. 192). As Svare notes, this is the most fundamental form of intuited objects – 'without them any intuition of objects would be impossible for us' (2006, p. 192). Thus, Svare claims that there is still a basic

schema associated with the empirical concept <dog>. This schema links the concept along with all its many conceptual marks to a dog in its most general sense – a being in space and time.

I think that we can take on board Svare's response for the purposes of defending Embodied Synthesis. However, his response raises the further question of whether there are distinct empirical schemata for empirical concepts, as opposed to the more basic mathematical and transcendental schemata required for spatio-temporal representation in general. To briefly explain, the transcendental schemata are the rules attached to the categories, the *a priori* concepts which necessarily apply to all objects in space and time. For example, the category of magnitude has an associated schema which governs the production of images of quantities (A142-3/B182). This schema is a rule that specifies that the succession of momentary units adds up to a certain extensive magnitude. The empirical concept of a dog is dependent on this rule in the sense that even determining an object as four-legged requires us to be able to count four units. So, it may be that empirical concepts are dependent on mathematical and transcendental schemata, rather than distinctive empirical schemata. I am not sure that anything is lost from Kant's account of synthesis if this is the case. His claim is simply that to classify spatio-temporal objects under empirical concepts, we must first be able to represent spatio-temporal figures.

We can apply similar considerations to Kant's other example of perceiving a house. Kant writes, 'I make the empirical intuition of a house into perception through apprehension of its manifold, [...] I as it were *draw its shape* in agreement with this synthetic unity of the manifold in space' (B162, my emphasis). Kant is not claiming that we can identify houses on the basis of shape alone, nor that we compare the house before us to images of houses that we have may have in our minds. Rather, we recognize that the bodily actions that direct our attention to the house follow rules for the production of certain spatio-temporal configurations. There will be plenty of bodily activity involved as we encounter the house from different perspectives and sense modalities. This activity enables us to do the more sophisticated classification that goes into recognizing particular spatio-temporal figures as parts of a house. Several spatio-temporal figures need to be brought under concepts like <door>, <roof>, and so on, before the empirical concept <house> can be applied. Of course,

there will also be plenty of conceptual activity, as we link the concepts <door>, <roof>, and <house>. But there needs to be a rule-governed composition of the manifold of intuition, if concepts can be applied to the object.

I think that Embodied Synthesis provides a consistent story regarding the schemata. My claim is that a concept specifies the features an intuition must exhibit in order to be subsumed under that concept. The schema of a concept specifies the general procedure by which intuition which have those features are produced. When the bodily activity of the cognitive subject is recognised as an enactment of this procedure, the resulting intuition is subsumed under the relevant concept. This is the work of the synthesis of recognition, which allows us to cognize an object as the kind of object that it is.

To further motivate this reading, I want to briefly compare my account with rival readings of the schemata. Two influential interpretations take opposing views, interpreting schemata either as intuitions or as concepts. On the one hand, Bennett (1966, p. 151f.), Guyer (1987, pp. 162–181), and Horstmann (2018, pp. 58, 64, 86–96) suggest that schemata are the rules for the subsumption of images (intuitions) under concepts. Given Kant’s definition of concepts as rules, this interpretation seems to imply that a schema is equivalent to a concept – the specification of the features which intuitions need to have in order to fall under that concept. On the other hand, Allison suggests that schemata (at least, the schemata of the categories) are not rules at all (Allison, 1981, 2004, pp. 210–218). Instead, schemata are intuitions of the features of the objects falling under the relevant concept.

We have good reason to reject both these interpretations of schemata. Kant appeals to schemata to explain how intuitions are subsumed under concepts. I find it hard to understand how schemata explain this if they just introduce a further intuition or concept. On the concept reading, we can connect a concept to another concept. But even if the second concept is more specific than the first, the cognitive process stays internal to the mind. This would be like connecting the concept <triangle> to the concept <line>. This does not explain how an intuition of a triangle can be subsumed under the concept of a triangle. Without this connection, there would be no representation of objects in space and time. On the intuition reading, we can associate an intuition with another intuition. Intuitions are particularly limited because they are

only specific representations, with specific features. Having an image of a particular triangle cannot tell us about triangles in general, which have a range of dimensions and distribution of angles. Whatever the cognitive process of comparing intuitions is, it remains disconnected from concepts. Without this connection to concepts, there would be no representation of an object *as* a kind of object. Thus, I think that synthesis of recognition cannot be achieved by an appeal to concepts or intuitions. Instead, the connection between concept and intuition is provided by a rule for the synthesizing activity which produces an intuition. We recognize the enactment of a general procedure, instead of comparing the resulting intuitions of that procedure, or the associated concepts of that procedure.

My interpretation of schemata is closer to a third kind of reading, which is offered by Longuenesse regarding schemata in general (1998), and by Allison regarding mathematical and empirical schemata (2004). The suggestion is that schemata are rules for the production of intuitions through synthesis. However, neither Longuenesse nor Allison interpret synthesis as embodied activity. At this point, I am still relying on my argument from mereology to defend this interpretation, as provided in the previous section. Bodily activity directs attention in such a way as to produce a representation with the same mereological features that Kant attributes to the representation of space and time. Kant has also ruled out that sensations or concepts of space and time can achieve this task of synthesis. In the next section, I bring these considerations together to provide a further reason to interpret synthesis as bodily activity, showing that this provides a compelling solution to the Problem of Intentionality. I suggest that the schemata cannot do their job of linking concepts to intuitions, without specifying a procedure for bodily activity.

### 3.6. A sketch of a solution to the Problem of Intentionality

In this first part of this chapter, I considered a problem of mereology. On Kant's account, space and time are infinitely divisible, yet are represented as a succession of moments of absolute unity. I have argued that this can be explained under an interpretation of synthesis as bodily activity. The subject directs attention by means of her bodily activity towards absolutely unified spatio-temporal regions. This allows her

to perceive a determinate spatio-temporal region at once. When there are several bodily actions, due to either bodily limitations or limitations in interest, there is a temporal sequence of apprehended units. Under the rules of the schemata, the activity which produces these apprehended units can be recognized as parts of a whole. This explains how an object can be perceived as an object. This provides Kant's full explanation of why the determination of space and time is made up of a succession of moments of absolute unity. An object can be seen at once when the cognitive subject directs her attention to it through bodily activity. The object can be seen at once *as* that object when that bodily activity is rule-governed.

I now have the basic ingredients to sketch Kant's solution to the Problem of Intentionality, showing how the contribution of the understanding is brought together with sensibility through bodily activity. The understanding provides concepts, specifying the features an intuition must exhibit in order to be recognized as belonging to a certain kind of object. Each concept has an associated schema, specifying the general procedure for producing intuitions which have those features. Sensibility is a bodily capacity of the cognitive subject to direct her attention for sensory reactions through bodily activity. This activity arranges reactions in a spatio-temporal form (an intuition). When the bodily activity of the cognitive subject is recognised as an enactment of a procedure specified by a schema, the resulting intuition has the relevant features to be subsumed under the relevant concept. The result is cognition of a spatio-temporal object as the kind of object that it is. The intentional link between the cognitive subject and the object of cognition is not provided by the concept alone, which is a general specification of features of objects of that kind. Rather, it is provided by the enactment of the procedure for activity which is associated with that concept. This bodily activity institutes a causal relation between the subject and object. Without this causal relation, there is no connection between the general specifications of the understanding and particular objects in space and time.

For example, say that I am stroking a dog. In reaching out and moving my hand, I arrange my sensory reactions such as <warm> and <soft> according to the spatio-temporal form provided by that action. I recognise that this bodily activity falls under a general procedure for producing an image of a dog, as specified by the associated schemata of the concept of a dog. This ensures that my sense perception is

representational – that it is of a dog in front of me. Imaginative synthesis, construed as bodily activity, provides a causal connection between the concepts of the understanding and the organization of the manifold provided by passive sensibility.<sup>31</sup> Without this causal connection, I am not perceiving the dog in front of me.

Instead, representations which refer to objects in space and time necessarily involve embodied activity. To borrow a turn of phrase from Melnick: in cognition, we relate to reality; reality does not relate itself to us (1989, p. 31). The understanding provides the rules for cognition, but it is bodily activity that enacts these rules, providing the immediate relationship between the cognitive subject and the sensible object. This bodily activity is neither a further mental item nor an unconscious sensation standing between the subject and objects of cognition. Intentionality is achieved neither by the body's causal receptivity, nor by the combination of representational contents through concepts alone. Instead, it is provided by a causal relation between the subject and the object, through which the subject's attention is directed towards the object.

## Part two: extending Embodied Synthesis

The argument for Embodied Synthesis is still incomplete. So far, I have relied on cases in which the object is present to the cognitive subject. I have therefore taken the imagination in a very broad sense of producing an image, rather than in the narrower sense of presenting objects in their absence. Kant himself writes, '*Imagination* is the faculty for representing an object even without its presence in intuition' (B151, original emphasis). This narrower notion needs to be addressed because Kant's primary concern is to account for cognition in cases where there is no empirical manifold, such as the *a priori* representation of space in geometry. For example, the geometer who is working out a proof does not have to actually point to anything to

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<sup>31</sup> Melnick notes that this involves the opposite direction of causation to traditional causal theories of reference, which claim that representations are the upshot of some causal chain from the world to the cognitive subject (1989, p. 31).

refer to a triangle. There may be no actual triangle in front of her to provide an empirical manifold of intuition. Instead, she has a pure manifold of intuition.

In the second part of this chapter, I investigate how far Embodied Synthesis can be extended to explain representations which involve neither bodily reception of sensations, nor actual bodily activity in relation to the objects of cognition. Such cases may seem to motivate an interpretation of synthesis as the internal activity of the mind. This seems to be what Longuenesse, Kitcher, and Bennett have in mind when they immediately dismiss the analogy between bodily activity and synthesis (Bennett, 1966, p. 143; Kitcher, 1990, p. 157; Longuenesse, 1998, p. 218). To give another example, Wolff claims that Kant's insight in the Transcendental Analytic is that concepts are 'ways of doing things', but specifies that these are 'forms of mental activity' (1963, p. 70). Indeed, Kant's emphasis on the *a priori* presents a problem for accounts that ascribe a passive role to the body, let alone the active role claimed by Embodied Synthesis. The challenge for the passive role is how the body could provide the pure manifold of intuition. The problem for the active role is how bodily activity could count as *a priori*.

In §3.7, I show that the intentional relation between the cognitive subject and objects of cognition encompasses possible, rather than just actual, bodily activity. I suggest how Embodied Synthesis can account for cognition of spatio-temporal objects which are not immediately present to the subject, as well as geometrical cognition. In §3.8, I raise the issue of the conflict between the spontaneity of the understanding, and the causal nature of bodily activity. I show that causality introduces a helpful constraint on spontaneity on Kant's account in the Analogies. This confirms that bodily activity is central to Kant's account of cognition. Nevertheless, this still leaves open a question regarding how causal activity comes under the rules of the understanding. In §3.9, I assess Embodied Synthesis in comparison with conceptualist and non-conceptualist readings of Kant. I conclude this chapter in §3.10 by raising the issues which my next two chapters will investigate.

### 3.7. Thoughts and geometrical cognition

The first step towards extending Embodied Synthesis is to show that schemata are rules which specify possible, rather than actual, bodily activity. One reason for this interpretation of schemata is that they prescribe general procedures for activity. Such procedures encompass several courses of action, each of which are individually correct, but together may be incompatible. For example, under the schema of a triangle, it is correct to draw a line, set my compass to 6 cm, and draw my next two lines according to where the resulting arcs intersect. But under the schema of a triangle it is also correct to set my compass to 5 cm, and draw my next two lines according to where the arcs intersect. Both activities are correct under the schema of a triangle, but I cannot do both at once. Thus, a cognitive rule refers to a set of possible, rather than actual, courses of action.

Another reason to consider possible activity is that any enactment of schemata is conditional. Evans and Melnick suggest two reasons for this claim (Evans, 2017; Melnick, 1989, Chapter 2).<sup>32</sup> First, Evans notes that for any rule, there may be rules which override it (2017, p. 47). For example, in the context of non-Euclidean geometry, the rules governing the construction of Euclidean triangles are overridden. Second, Melnick claims that rules governing bodily action are conditional on our desire to obey them (1989, p. 33). Whenever a geometer thinks about triangles, she is governed by the schema of a triangle. This schema tells her that it is correct to take a pencil, pair of compasses and a straight-edge, and draw the relevant intersecting arcs and lines. But sometimes she does not enact this rule – perhaps she does not have pencil and paper to hand. The rule and its content are not dependent on the specific desires and context of the geometer. Nevertheless, the enactment of the rule is conditional on there being no overriding rules, and on the desires and context of the cognitive subject. Thus, cognitive rules refer to possible activity in the following way: they specify what it is possible to do to direct attention for sensory reactions through bodily activity and still be correct (for a similar formulation of this claim, see Melnick, 1989, p. 37).

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<sup>32</sup> Evans interprets synthesis as mental activity, so I take his comments about rule-following in isolation from the rest of his account.



Now that we have expanded the framework of Embodied Synthesis to encompass possible bodily activity, I want to address the case of spatio-temporal objects which are not immediately present to us. For example, say that I am thinking about the dog in my neighbour's garden but cannot presently perceive it. Melnick has argued that such cases are especially problematic when it comes to explaining intentionality (1989, Chapter 1). My thought of the dog is neither produced by my mind alone, nor by the dog itself when it is not present to me. So, what makes it the case that it refers to that dog, and that dog alone? As we have already seen in this chapter, Kant claims that intentionality lies neither in concepts nor sensations alone. On the one hand, sensations alone are non-representational. On the other hand, concepts alone are too general to pick out my neighbour's dog. According to Kant, concepts refer by means of specifying features which are common to several objects (A320/B377). My concept of my neighbour's dog includes concepts of features such as <four-legged> and <brown>, which many different objects satisfy. The problem is that no matter how specific my concepts are, a merely possible dog could also satisfy them. This is the case even if I have some spatio-temporal description of the dog, such as <the dog which is now 10 metres away from here>. A merely possible dog could still satisfy this description. Of course, as Melnick suggests, if the domain of objects were fixed to encompass only actual spatio-temporal objects, then my concepts and spatio-temporal descriptions would only pick out actual objects (1989, pp. 2–3). But nothing about concepts themselves fixes the domain of reference in this way. Thus, I cannot refer to my neighbour's dog using concepts alone.

Melnick's considerations suggest that the Problem of Intentionality arises in full force for cases in which the object of cognition is not immediately present to the subject. In order to pick out the actual dog, my thought needs to put me into a causal relation to the dog. Causal relations can only hold between actual objects, so this would ensure that my domain of reference is fixed to actual objects. I have already sketched how this works in the case of sense perception – I actually act through my sense organs in relation to the dog and am thereby put in causal relation to that dog. But in the case under discussion, I do not actually act. So, how can there still be a causal connection between me and the dog?

My proposal is that thinking about a spatio-temporal object institutes a present disposition to act so as to make causal contact with that object. This relies on the interpretation of schemata as rules which govern bodily activity. Such rules fix the domain of representation to the realm of actual objects. An extremely simplified example of a rule that is included in my thought about the dog in my neighbour's garden would be: it is correct to walk into my neighbour's garden, reach out my hand, and react <soft>. In providing myself with this rule, I now have the disposition to perform this course of action. But there are still two ways I can respond to this rule. When I do want to touch the dog, I go ahead and actually act in accordance with this rule. When I do not want to touch the dog, I do not act. In both cases, the representational content of the thought provided by the schemata remains the same, specifying the bodily activity which it is possible to perform and still be correct in reacting that way. The rule results in contact with the actual dog on the condition that I have the relevant desires and in the absence of any overriding rules. Thus, my thought institutes a causal relation between me and the dog, even though I do not actually act.

The resulting view is that the content of thought about spatio-temporal objects is primarily a prescription for our own behaviour in relation to those objects. Such thought involves making a claim about the spatio-temporal object. We act upon these claims when we have the relevant desires and when there are no overriding rules in place.

I first want to work out the implications of this claim in the case of geometrical objects. The particular problem for geometry is how geometrical cognition allows us to make universally valid judgments such as 'the internal angles of a triangle add up to 180 degrees', without needing to test every empirical instance of triangles. What allows the universal application of geometrical judgments to objects in space? Kant claims that geometry relies on the *a priori* representation of space (B160, note). I have already been using the geometrical concept of a triangle in my examples, but I have only discussed cases of perceiving a triangle on paper. I now consider cases in which there is no actual triangle.

In discussing the problem of geometry, Kant rules out two candidates for a solution. First, his arguments in the Transcendental Aesthetic work to reject the option that the *a priori* intuition of space is provided by combining concepts of space in the

mind. These concepts already presuppose rather than provide the representation of space: ‘one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space’ (A24-5/B41). The *a priori* intuition of space required for the universal judgments of geometry is not provided through a concept of space. Second, Kant rules out the option that any particular intuition can secure the generality of geometrical judgments:

No image of a triangle would ever be adequate to the concept of it. For it would not attain the generality of the concept, which makes this valid for all triangles, right or acute, etc., but would always be limited to one part of this sphere.  
(A140-1/B180)

An intuition is a singular representation, involving specific, not general, spatial determinations. For example, an intuition of a triangle has lines of a specific length, a specific area, and so on. This cannot explain the universal validity of geometrical judgments about triangles. A further consideration against intuition playing this role is that we can make judgments about geometrical objects for which we have no intuitions. For example, we do not have an image of a triangle with sides that are 1 million kilometres long, but we can still make judgments about such a triangle. Kant concludes that geometrical judgments do not rely on intuitions, which present specific rather than general properties. Geometry also does not rely on sensations, which are non-spatial. The explanation of the universal validity of geometry comes neither from the activity of the understanding, nor the receptivity of sensibility.

Instead, Kant claims that ‘it is not images of objects but schemata that ground our pure sensible concepts’ (A141/B180). We have already covered the ingredients needed to elaborate on this claim. The apparatus of the schemata allows Kant to focus on general procedures rather than the product of synthesis. A schema is a rule ‘according to which such an intuition can *always* be exhibited’ (A105, my emphasis). Any intuition produced according to the schema of a concept will always exhibit the features which are necessary for an intuition to fall under that concept. For example, the schema for the concept <triangle> is: draw three straight lines in a plane, such that each line intersects with the other two. All the products of action that follows this schema will share the marks that all triangles have. The specific dimensions of the resulting image can vary. Indeed, the image can be imperfect, such as having wobbly

sides. As long as the procedure for producing the image is in view, the image can still be used to demonstrate the truths of geometry.

This also explains why geometrical judgments can surpass the images we in fact have. The schemata provide the rule for procedures that surpass our image-making abilities, such as prescribing a successive addition of an extremely large number of units (A140/B179). The generality of geometrical cognition is secured by considering the rules governing synthesis, rather than any particular product of this rule-governed synthesis.

I think that this account still leaves a question unanswered. Even though the generality is secured by rule-following, there is still a question of the provision of the spatial content of geometry. What makes it the case that these rules refer to procedures for producing spatial images, and so apply to every representation of space? The universal application of geometry to all objects in space relies on there being a connection between the cognitive subject and objects in space.

I suggest that Embodied Synthesis provides the answer. A rule counts as a rule of geometry, pertaining to spatial representation, when that rule governs bodily activity. My motivation for this claim is that it is only by means of bodily activity that the manifold of intuition gets arranged in space in the first place. Before the subject acts, there is no positing of reactions, so there is no representation of space prior to this activity. Space is first given as an empirical intuition through the continuous bodily activity of the cognitive subject. This suggests that every representation of space is dependent on the capacity for bodily activity. If we remove all reference to bodily activity, we have no spatial content to our thoughts. Every representation of space, even merely imaginary space, is a representation of a part of the single space of possible bodily activity.

The capacity for bodily activity is *a priori* insofar as bodily activity is prior to any sensory reactions that result from it. The body provides the pure manifold, albeit in a different way to how it provides the empirical manifold. The empirical manifold is provided by specific enactments of rules, with actual bodily activity resulting in sensory reactions. The pure manifold is provided by consideration of the rules governing bodily activity, rather than any specific enactments. So, there are no sensory

reactions involved. The geometer represents space *a priori* by means of the general procedures by which bodily activity produce spatial images.

I further argue that the body plays an active role in combining the pure manifold, providing an *a priori* representation of space. Even when merely imagining the construction of a triangle, the geometer imagines carrying out the relevant bodily actions in space. An example helps to take away some of the strangeness of this claim. Say that I use my finger to draw a triangle in the air. The product (the triangle) is merely imaginary, but it is still ‘in the air’, in the sense that it is in the space of bodily activity. To get to what the geometer does, simply remove the actual bodily activity, which did not produce an empirical object anyway. The geometer draws merely imaginary triangles and other geometrical objects ‘in the air’ without actually moving.

Another way to put the same point is that geometry is the study of the form of space, which is ‘the way in which the subject is affected’ (B129). The form of space is how we act through our bodies so as to order sensory reactions. The form of sensibility is responsible for our being affected by objects, not the other way around. Bodily activity precedes the actual reception and structuring of sensations, so it is not derived from any experience of objects in space. Rather, determinate representation of a region of space only arises through bodily activity. The space investigated in geometry is the space of all the possible ways of relating to objects through bodily activity.

In this section, I have considered Kant’s emphasis on the pure and *a priori* in his account of synthesis. The first step to expand my account was to argue that the schemata are rules which govern possible bodily activity. I suggested that we can think about objects which are not present to us because our thoughts provide rules which govern possible activity in relation to those objects. I then applied these considerations to geometry. Kant suggests that geometrical cognition is not derived from any particular intuition, but from the general procedures for producing intuitions. I suggested that the content of geometry, which guarantees that it applies to objects in space, refers to procedures for bodily activity. The *a priori* representation of space is provided when the cognitive subject constructs rules governing possible bodily activity.

### 3.8. Spontaneous activity

How does Embodied Synthesis fit with Kant's claims that the imagination inherits the spontaneity of the understanding (B162, note)? Kant defines the understanding as 'the faculty for bringing forth representations itself' (A51/B75). He also claims that the spontaneity of the understanding refers to the capacity of the subject to construct rules for herself without learning them from experience (A126).<sup>33</sup> This has led to readings of synthesis according to which the body plays no role. For example, Longuenesse writes that the 'spatiotemporal ordering of qualities in the object' results from being '*affected both by the thing in itself and by spontaneity*' (1998, pp. 215–217, original emphasis). Bodily activity is neither noumenal nor spontaneous. So, how can imaginative synthesis be bodily?

There are many different questions raised by Kant's notion of spontaneity of the understanding.<sup>34</sup> My focus in this section is on one line of argument in *KrV* that shows one way that Kant relates the passivity of sensibility which 'receives representations' to the spontaneity of the understanding which 'brings forth representations itself' (A51/B75). Kant needs a constraint on the construction and application of rules through the understanding. I argue that he provides this constraint in terms of the cognitive subject's participation in the causal community of objects in space and time. This suggests one way to relate an embodied interpretation of sensibility to Kant's claim about the spontaneity of the understanding, in terms of a distinction between the provision of rules and the enactment of rules.

Kant's claim that the understanding is spontaneous raises the question: what are the limits on rule construction and application? The cognitive subject represents spatio-temporal objects through the construction and application of rules. But if the

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<sup>33</sup> This is not to say that the subject represents her own rules to herself. If a cognitive rule were an explicit representation, then there is a question of how we represent that rule, which requires us to postulate another cognitive rule, and so on (Evans, 2017, p. 46; Longuenesse, 1998, p. 50).

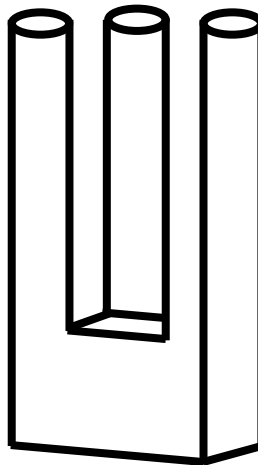
<sup>34</sup> See Moran (2018) for a helpful overview of recent developments in discussions of Kant's notion of spontaneity. Influential treatments include Sellars (1956); Allison (1989, 1995); and Pippin (1987).

rules are given by the subject to herself, how do we guarantee that she is in fact representing spatio-temporal objects? At the very least, the intersubjectivity of the world of objects comes under doubt if each subject is without any constraints in constructing and implementing their own rules governing the organization of the manifold of intuition.

I first want to discuss two options that do not work to sufficiently constrain the understanding. The first option is that the constraint on rule application is a further rule of possibility. The plausible idea behind introducing this internal constraint is that a rule which demands impossible bodily action cannot be a correct way to make contact with objects. Kant has a rule of possibility defined in terms of the following schema:

The schema of possibility is the agreement of the synthesis of various representations with the conditions of time in general (e.g., since opposites cannot exist in one thing at the same time, they can only exist one after another), thus the determination of the representation of a thing to some time. (A144/B184)

For example, consider the following figure:



*Figure 4: Impossible trident*

We have an image of this trident, even though it is not a possible object. I suggest that it has been constructed using at least two procedures: one which produces a figure which had 3 prongs at one end, and one which produces a figure with 2 prongs at the

other end. Both procedures together violate the rule of possibility – that a procedure of bodily action must determine the object in some time. The image as a whole violates the schema of possibility, and so cannot be subsumed under the concept <possible>. This accords with Kant's claim that the demonstration of a lack of logical contradiction is not equivalent to a determination of possibility. His example is that 'the concept of a figure that is enclosed between two straight lines' is not logically contradictory, but it is still not a concept of a possible object (A220/B268). In this case, this is because the figure does not fulfill 'the conditions of space and its determinations' (A221/B268). Thus, rule application is constrained by what it is possible to do in one space at one time.

However, even if Kant's notion of possibility is more restricted than logical possibility, it is still very broad. It says nothing about what is possible in different times and places. Thus, the internal constraint of possibility is insufficient to specify which rules represent the external world.

The second suggestion is that there is an external constraint on the rules of the understanding. Taking the manifold of intuition as a whole, there is only one way to act so as to combine it in the correct way. The provision of sensibility therefore provides a constraint on our rules – we cannot choose what spatio-temporal figure is a part of another figure, and so on. However, the problem with this suggestion is that it seems to conflict with Kant's characterization of the imagination as spontaneous – the subject freely synthesizes the manifold.

Both suggestions point in a similar direction. The first suggests that what is needed is a constraint on what is possible with respect to all space and time, rather than what is possible in one region of space and time. The second suggests that a constraint is needed such that there is only one possible way to arrange the manifold of intuition. There needs to be a guarantee that the rules governing synthesis relate the subject to a unified world of space and time. This points towards a commonsense solution, which would be that cognition is correct when it is constrained by what there is in the world.

However, going in this direction for a solution raises problems for my account of Embodied Synthesis. First, according to Embodied Synthesis, the content of our cognition has to do with our own bodily activity. On my account, the causal relation



required for representation goes *from* the cognitive subject *to* the world, not the other way around. I have argued that this is a crucial part of Kant's answer to the Problem of Intentionality. Second, what procedures could there be for bodily action such that we can represent a unified world in time and space? Given that there is so much to unify in the world, how can the cognitive subject achieve this? Moreover, the rules the subject gives to herself govern her present and future actions, but she cannot act into the past (Melnick, 1989, p. 36). Thus, there is a problem regarding the representation of objects in all of time.

In response to these concerns, I argue that Kant's account of objective time-order offers a way to provide a solution along the lines of the commonsense suggestion. This in turn relies on interpreting synthesis as bodily activity.

Kant's account of objective time-determination can be found in the Analogies.<sup>35</sup> The Transcendental Deduction defends the necessary application of the categories, showing that without rule-governed synthesis there is just the 'mere play' of the mind, which is 'less even than a dream' (A112). The task of the Analogies is to establish the legitimate application of principles which involve the relational categories, addressing the separate concern that even with synthesis, each subject just has her own consistent dream. Kant famously contrasts the experience of watching a ship sail downstream with the experience of looking at a house (A192/B237). Synthesis of apprehension and reproduction only provide us with a series of perceptions. The ship experience is a case of perception of succession: the ship is high in the stream at  $t_1$ , in the middle at  $t_2$ , and low in the stream at  $t_3$ , and the ship does not simultaneously exist in all three positions through  $t_1$ - $t_3$ . The house experience is a case of successive perception without perception of succession. Each part of the house is seen at a different time – the roof at time  $t_1$ , the door at  $t_2$ , then the basement at  $t_3$ . Unlike the ship, the parts of the house do exist simultaneously through  $t_1$ - $t_3$ . In each case, there is succession: <roof>, <door>, <basement>; <ship-high>, <ship-middle>, <ship-low>. Kant claims that from the sequence of perceptions on their own, we would not be able to distinguish between these two kinds of cases – the first being one in which each perception

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<sup>35</sup> In outlining my reading of the aspects of the Analogies relevant to this chapter, I do not have space to cover interpretative disputes. See Melnick (1973), Guyer (1987), Longuenesse (1998), and Watkins (1997) for influential readings.

necessarily follows from the previous one, and the second being a case in which the perceptions could either precede or follow each other. Yet, it is a fact of experience that we do distinguish between sequences, as objects and as events.

Kant claims that we need to appeal to *a priori* principles which govern cognition, involving each of the three relational categories (substance, causation and mutual interaction). In the First Analogy, he argues that temporal relations between appearances cannot be represented without a representation of some underlying, unchanging substratum. This is because objective ‘time itself cannot be perceived’ (A183/B226). Instead, ‘it is in the objects of perception, i.e., the appearances, that the substratum must be encountered’ (B225). This substratum is Kant’s take on a traditional rationalist notion of substance as the bearer of properties: ‘that which persists is the object itself, i.e., the substance (*phaenomenon*), but everything that changes or that can change belongs only to the way in which this substance or substances exists, thus to their determinations.’ (A184/B227). Substance is reinterpreted as a relatively persisting phenomenal object which is necessary for the determination of succession and coexistence in time. For example, a house does not last forever, so it is the property of some more fundamental object. Nevertheless, the house can still be used as the relatively persisting backdrop for the determination of the temporal relations between its windows, roof, and doors.

In order to determine an objective time-order, the understanding needs to construct and apply a rule that treats any appearance in space and time as a property of something permanent. Under this rule, it is correct to act towards whatever affects us as a property of something that has existed in the past, and continues exist even when it is not immediately present. Svare’s example of bodily action governed by this rule is ‘searching for an object, including when this object is not immediately perceived’ (2006, p. 296).

The Second Analogy provides an initial explanation of the distinction between the sequences of the experiences of the house and the ship. Kant introduces a principle of causality, which is an *a priori* rule connecting perception such that they gain a necessary order. A mark of the employment of this rule is that the ship sequence is irreversible. The house sequence can be rearranged by looking first at the basement, then the door, then the roof; the ship sequence cannot be rearranged in this way. This

is because the ship being high in the stream at one moment causes the ship being in the middle of the stream in the next moment, then low in the stream in the next moment. A causal relation holds between moments of an event, endowing them with an objective order that is lacking in the case of objects.

However, this cannot be Kant's final word on the determination of objects and events. Whatever position from which an observer would be able to view the roof is presumably not one from which the basement can be seen. The perceiver must be moving around the house, or, at the very least, eye movement is involved. So, what distinguishes the house and ship events? This suggests that even the house sequence needs a rule for its determination. If appearances were just isolated in space, with no connection to each other, we would have no reason to say that they exist in the same time rather than just alternating with each other – reversible perceptions reveal that 'one [perception] is in the subject when the other is not, and conversely' but not that 'two objects are simultaneous, i.e., that if the one is then the other also is in the same time' (A211/B257). Without some connection, 'the chain of empirical representations, i.e., experience, would have to start entirely over with every new object without the previous one being in the least connected or being able to stand in a temporal relation with it' (A214/B261). Thus, all appearances must be in causal relation to each other in time.

The Third Analogy provides the principle for the community of all substances. The rule providing the necessary connection of all appearances is interactive reciprocity – that is, substances all fall under the same necessitating principle of unity. Kant claims that substances must stand in relations of mutual causal interaction in order for us to experience them as simultaneous. Kant's ascription of necessary relations between substances is a further transformation of rationalist substance to phenomenal substance. He ascribes a causal unity to the entire universe of appearances, according to which the position of each object is determined with respect to all others.

Kant claims that causal unity is also a necessary condition of cognition of objects in space and time: 'All appearances lie in one nature, and must lie therein, since without this *a priori* unity no unity of experience, thus also no determination of the objects in it, would be possible' (A216/B263). I suggest that his argument is as

follows. For objective time-order to be determined, the understanding needs to construct and apply a rule that treats any appearance in space and time as a property of a substance which can be determined with respect to all other substances in space. The rule associated with this principle of causal reciprocity is a general procedure for directing attention through an action that relates two substances together in one time. Kant's example involves the movement of the eyes: 'I can direct my perception first to the moon and subsequently to the earth, or, conversely, first to the earth and then subsequently to the moon, and on this account, since the perceptions of these objects can follow each other reciprocally, I say that they exist simultaneously' (B256-7). Similar rules govern the distinction between the experiences of the house and the ship, including the correct procedures for bodily action such that it can be determined that the house is not moving in relation to the cognitive subject, whereas the ship is in fact moving. For bodily action to determine simultaneous existence, my body must be a spatial substance amongst all others, participating in the causal unity between the moon, the earth, the house, and the ship, and so on.

Kant's considerations in the Analogies fill in the details of his solution to the Problem of Intentionality. Cognition involves rules which institute a reciprocal causal relation between the subject and the object through bodily action. Thus, the cognizer relates to all other objects in a vast causal network:

From our experiences it is easy to notice that only continuous influence in all places in space can lead our sense from one object to another, that the light that plays between our eyes and the heavenly bodies effects a mediate community between us and the latter and thereby proves the simultaneity of the latter, and that we cannot empirically alter any place (perceive this alteration) without matter everywhere making the perception of our position possible; and only by means of its reciprocal influence can it establish their simultaneity and thereby the coexistence of even the most distant objects (though only mediately). (A213-4/B260-1)

The human body is united by mutual causation to other bodies, such as planets and stars. This bodily participation in causal community is the condition of cognizing anything in space and time at all.

On my reading, the Analogies provide Kant's solution to the problem regarding the provision of a suitable constraint on the rules of the understanding. The understanding must construct and apply causal principles, governing our experience of alteration, persistence, and co-existence by linking the whole world of objects together in causal community. Kant relies on the embodiment of the cognitive subject to constrain the rules constructed by the understanding. This is as close as he can get to the commonsense idea that cognition is constrained by what there is in the world. The content of our cognition has to do with our own bodily causality, and it is this that puts us in a causal relation with what there is in the world. Causal principles therefore transform individual bodily actions into cognitive activity in relation to all other objects in the world. These principles can only play this constraining role under an interpretation of the imaginative activity as bodily activity. Thus, Embodied Synthesis is central to Kant's account of cognition of objects in space and time. Intentionality depends on the necessary unity between all objects, a unity which the subject must be able to both participate in and impose through the rules that she constructs and enacts.

Kant's account in the Analogies suggests that the relationship between the spontaneity of the understanding and the causal nature of sensibility is the relationship between the provision of rules and the enactment of rules. The bodily activity of imaginative synthesis is spontaneous when the rule for that action originates in the cognitive subject. However, the cognitive subject is constrained through sensibility to construct and enact rules which connect objects together in causal community.

Even though Kant's argument in the Analogies fills out further details of Embodied Synthesis, a serious tension between causality and spontaneity remains unresolved. On Kant's account, the understanding is an expression of the need for conceptual activity in cognition; sensibility is an expression of the need for bodily causality. Neither is reducible to the other, and cognition of objects in space and time depends on both. Cognition of objects in space and time is the activity of a rational agent, but it is also the causal activity of an embodied agent. The remaining tension in Kant's account of cognition is a result of this dual status that he assigns to human beings.

### 3.9. Assessing Kant's progress

I now turn to assessing Kant's progress according to my reading of *Embodied Synthesis*. To bring together the results of this chapter, I first want to compare Kant's account of cognition to the accounts provided by Leibniz and Hume.

On the one hand, even though Leibniz reaches for an account of embodied cognition, his commitment to monadic simplicity undermines any appeal to real community, trapping the monad within its own mental activities. It is worth noting that elements of Kant's account are drawn from Leibniz's account. According to Leibniz's theory of *petites perceptions*, '[a]t every moment there is in us an infinity of perceptions' (*NE* p. 53). At least two factors are involved in bringing perceptions to consciousness. First, the impressions have to be of the right kind – 'large' and definite enough to be received by bodily organs. How 'sharp and definite' the perceptions are depends on the 'set up' of the organs of the monad's body, such as the lens of the eye, which 'make the material impressions they receive sharp and definite'. Second, there must be an act of apperception. The move to conscious perceptions is a matter of being 'alerted', 'paying heed', 'taking note' (*NE* p. 54). The major difference is that Kant provides a bodily reinterpretation of Leibniz's vision of inner monadic unity. Objects can only be known through the subject's participation in causal community.

On the other hand, Hume posits singular impressions in sequence but claims that these are insufficient to provide the idea of a single object. Elements of Hume's account are taken up in Kant's account. For example, Hume considers the way that dots of ink on a page, or parts of insects, appear or vanish in perception according to our distance from them (*THN* 1.2.4.7.; p.42).<sup>36</sup> He writes that our senses 'represent as minute and uncompounded what is really great and compos'd of a vast number of parts', but does not go into any further detail (*THN* 1.2.1.5; p.28). Hume attempts to account for unity in terms of the workings of the imagination. However, his account only leads to the dissolution of subjects and objects, and any relation between them. Kant makes much more of the imagination than Hume, showing that it involves an

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<sup>36</sup> See Frasca-Spada for further discussion of these cases (1997).

active, bodily capacity. The body no longer belongs only to the realm of anatomists; instead, it is a condition of the cognition of objects in space and time.

I suggest that the debate about conceptualism has its roots in Kant's original project of answering the threat to intentionality posed by empiricists on one side, and rationalists on the other. A major line of argument in support of a conceptualist reading of Kant comes from his response to the empiricist attempt to derive intentionality from the affection of the senses alone (see e.g. Allison, 2004, p. 162; Gomes, 2014; Land, 2011; Longuenesse, 1998, p. 213). As Hume's skeptical arguments demonstrated, the endpoint of empiricism is the dissolution of objects. Kant's strategy in response is to identify a source for intentionality in the understanding which is in some way prior to sensible affection (Land, 2011, p. 205).

An important line of argument in support of a non-conceptualist reading of Kant comes from identifying the distinctive contribution of sensibility to cognition. This can be reformulated in terms of Kant's response to the threat to intentionality posed by rationalist accounts. As Leibniz's ultra-rationalist system demonstrated, we cannot work down from the generality of concepts to the representation of particular spatio-temporal objects. Instead, we need to be put into immediate contact with objects through sensibility. As commentators such as Allais (2016, p. 8), Gomes (2014, pp. 6–7), and McLear (2011, p. 14) have pointed out, Kant is so committed to this contribution of sensibility that he attributes the capacity for representation to non-human animals, even though they do not have the capacity of the understanding.

On my reading of Kant's theory of cognition, sensibility and the understanding provide separate contributions to cognition. These contributions provide the answer to two different questions. The first question is: how is it possible to have a singular spatio-temporal representation? This is answered by Kant's account of figurative synthesis, which summarizes the syntheses of apprehension and reproduction. This synthesis arranges the manifold of intuition in a temporal sequence of spatial units, providing an intuition of a spatio-temporal particular. There is a kind of unity that can be explained in causal terms alone. The second question is: how is it possible to subsume intuited objects under concepts, such that we represent those objects as the kind of objects that they are? This is answered by Kant's account of rule-governed synthesis. These rules provide the mereological integration of a sequence of

apprehended units, resulting in cognition of a spatio-temporal particular *as* an object. Sensibility and understanding are involved at different stages of cognition, explaining why Kant attributes synthesis to both sensibility and understanding.

We can now reassess the apparently conflicting lines of argument leading to conceptualist and non-conceptualist readings of Kant's theory of cognition. The conceptualist mistake is to interpret figurative synthesis as Kant's response to empiricism, appealing to the deployment of conceptual capacities to answer the question of the provision of intuition. Kant instead appeals to the embodied capacity of sensibility, with its provision of the forms of space and time through bodily activity, to account for the presentation of spatio-temporal particulars. The non-conceptualist mistake is to focus on Kant's response to rationalism at the expense of neglecting his response to the empiricist problem of mereological integration – a problem which needs an appeal to the deployment of conceptual capacities as a solution. How does this help regarding Kant's argument in the Transcendental Deduction and his commitment to the possibility of non-human animal perception? I take each line of argument in turn below.

### 3.9.1. Conceptualism and the Transcendental Deduction

The concern of conceptualists is to preserve Kant's anti-empiricist arguments, particularly in the Transcendental Deduction. I will not defend Kant's argument, but I will present a sketch of how the steps of the argument fit together under Embodied Synthesis.

Kant's stated aim in the Deduction is to show 'how subjective conditions of thinking should have objective validity, i.e., yield conditions of the possibility of all cognition of objects' (A89-90/B122). Kant seeks to show that the categories, a certain group of *a priori* concepts, are objectively valid. The implication is that we are justified in applying the categories to all objects of possible experience. This is a justification that Kant accuses empiricists such as Locke and Hume as lacking (B118-9). Locke explains the empirical means by which we come to possess concepts rather than justifying our use of them. Hume claims that he cannot find impressions which correspond to concepts such as causation and so instead appeals to subjective imaginative associations.

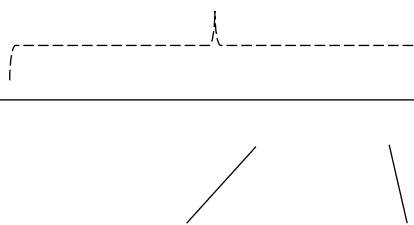
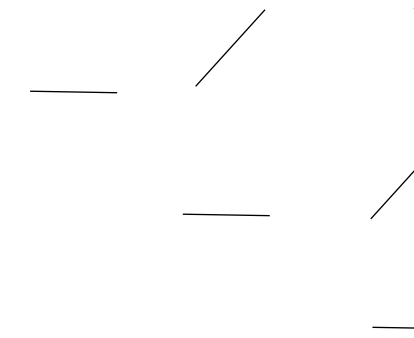
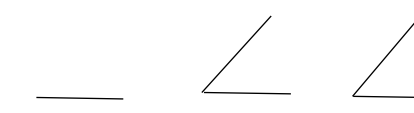


In the course of his argument, Kant introduces his notion of the transcendental unity of apperception. The application of the categories not only unifies my experience of objects, but also provides self-consciousness of my experience as mine: mental states must belong to one unified point of view to become ‘my representations’ (B132). Kant claims that the same act of the understanding which subsumes intuitions under the categories also brings them under the unity of apperception – the categories are ‘just these functions of judgment’ which bring the manifold ‘into one consciousness’ (B143). He refers to synthesis of recognition under a concept. I have explained that this provides combinatorial unity to intuitions by subsuming them under a concept. Kant claims that this synthesis presupposes the unity of apperception, which is therefore ‘transcendental’ (B132). This is because several processes go towards this subsumption, including not only bodily activity of synthesis, but also the combination and comparison of present and previous perceptual states and concepts. The sensory manifold must be recognized as being unified through activity which belongs to one and the same subject. This unity of the subject is not provided by the category of unity, the application of which already presupposes unity (B132). Instead, Kant appeals to a higher, ‘transcendental unity of apperception’ (B132). To get from the manifold of intuition to any cognition, there is a process by which the understanding, via the categories, brings representations under the unity of apperception (B135). The result is that the thought ‘I think’ can be attached to any of my representations, showing them to be mine. When the sensory manifold is brought under the activity of the understanding, the categories are necessarily applied.

The schemata provide a rule for bodily activity, through which the manifold of intuition is combined so as to be subsumed under the concepts of the understanding, including the categories. When the sensory manifold is brought under the concepts of the understanding according to the rules of the schemata, it is also brought under the transcendental unity of apperception. The step between the synthesis and rule-governed synthesis is also a step from activity which directs attention for the reception of the sensory manifold (apprehension), to rule-governed activity which also presupposes the transcendental unity of apperception (cognition). The transcendental unity of apperception guarantees that the same rule is applied throughout. Otherwise, I would be left with a sequence of isolated movements, and the reactions produced will not be anything to me. This unity ensures that my bodily actions are brought

together in one experience. Thus, the deployment of conceptual capacities is necessary for the unity of representations through time.

To use the illustration of the cognition of a triangle, the contribution of the transcendental unity of apperception can be depicted as follows:

Apperception:	<b>I = I = I</b>		
Recognition:	< <b>triangle</b> >		
Apprehension:			
Reproduction:			
	$t_1$	$t_2$	$t_3$
Cognition:			

*Figure 5: Apperception*

The transcendental unity of apperception guarantees that the rule associated with the concept is enacted by the same subject throughout ( $I = I = I$ , through  $t_1$ - $t_3$ ). The identity of the subject is the basic condition for rule-following. Otherwise, it could be that an action following the rule for the concept of a triangle is performed in the first moment, then a separate action following the concept of a square is performed in the next moment, and so on.

My reading of the Transcendental Deduction has the additional advantage of distinguishing it from the argument of the Refutation. Some read the Transcendental Deduction as responding to skepticism about the existence of the external world (see e.g. Strawson, 1966). As Ameriks suggests, this reading is puzzling because this also seems to be the task of the Refutation of Idealism (1982, p. 13). Indeed, Wilkerson concludes that the Refutation is ‘redundant’ on this basis (1976, p. 82). On my reading, the Transcendental Deduction explores the necessary conditions for intentionality – that is, the possibility of having representation at all. The Refutation aims to demonstrate that objects exist independently of our representations of them, showing that this is a necessary condition of the temporal determination of empirical self-consciousness.

Therefore, cognition of a spatio-temporal particular as a mereologically integrated object is not a product of the subject’s being affected, and requires more than just causally-governed synthesis. It requires rule-governed synthesis. Nevertheless, the structure provided by the understanding could not be applied without the embodied activity of the cognitive subject. Conceptual capacities alone do not explain the intentionality of cognition. The mental apparatus of unified consciousness and the rules of the understanding need to get to work on something, and that something is bodily activity.

### 3.9.2. Non-conceptualism and non-human animals

Non-conceptualists are concerned to preserve a distinctive contribution of sensibility to cognition – a contribution that can be dramatized in terms of non-human animal perception, which occurs in the absence of the deployment of conceptual capacities. According to the non-conceptualist interpretations of Kant given by Allais (2017, pp. 32–33), Tolley (2013, pp. 122–123), and McLear (2015, pp. 100–101), the manifold of intuition has its own unity prior to the deployment of conceptual capacities. They admit that this is a basic kind of unity that does not yet constitute a complex intuition which can be subsumed under concepts (Allais, 2017, pp. 37–44; McLear, 2015, p. 201).

I think that Embodied Synthesis preserves something of what these commentators are trying to show. As synthesis is bodily activity, the representation of spatio-

temporal particulars (intuition), is possible without the deployment of the rule-giving capacities of the understanding. This relies on identifying an active aspect of sensibility that has not been recognized by these commentators. Sensory reactions are representational only when they are arranged in space and time through embodied synthesis. However, the resulting spatio-particulars will not be cognized as objects of any particular kind.

How does my claim about synthesis which occurs in the body fit with the argument of the Transcendental Deduction that all conscious representations come under the categories? I think that Kant's distinction between weak and strong consciousness can be used to answer this question. Let me explain using Kant's example of a musician doing rapid improvisation. The musician directs weak consciousness through her moving fingers to the different notes she is playing – this explains her capacity to produce music. However, she does not direct strong consciousness by this activity, which is reflected by the fact that she cannot remember the distinctions between the notes after she has finished playing. In general, weak consciousness encompasses those conscious elements which lie beyond the focus of our attention during our bodily activity. Even though in practice we distinguish between these elements, we do not recognize the differences. To give another example, say that I walk down a busy street whilst thinking deeply about Kant. I do not remember any of the pedestrians that I passed along my way. Nevertheless, I successfully navigated past them, so I must have determinately presented each of them in space and time. This can be explained by an appeal to my bodily activity, which directed weak consciousness as I walked. As a further example, in directing strong consciousness through pointing to a line, I am also weakly conscious of the miniscule parts making up that line.

I suggest that this shows that we, as well as non-human animals, can consciously represent spatio-temporal particulars in the absence of the deployment of conceptual capacities. Because only weak consciousness is involved, the resulting perception does not allow any conceptual classification. The argument of the Transcendental Deduction is restricted to cases of strong consciousness. All activity which directs strong consciousness is governed by the rules provided by the understanding. I think that in his focus on defending the categories, Kant tends to underplay the extent to which our everyday activities rely on weak, rather than strong consciousness.

What is the resulting account of non-human animal perception? My suggestion is that non-human animals direct consciousness to spatio-temporal regions through bodily activity, such that they react in regular ways to the empirical manifold of intuition. However, as their activities are not rationally governed, they cannot be said to represent those regions as objects. They are unable to distinguish between successive perception and perception of succession. The orderings of their perceptions are determined by contingent biological processes. To expand on this point further, when a non-human animal has a disposition to act, it is the case that if an object were present to it now, it would act in certain ways. For example, a lioness has a disposition to hunt small-sized animals. It is true of a lioness now that if she were to meet my neighbour's dog, she would act in certain aggressive ways towards it. But the lioness does not represent the dog by virtue of her disposition. Her disposition is not rule-governed – it does not demand anything of her without the dog being present before her. So, although a lioness can track objects through space and time when she hunts, she cannot not think about these objects as existing in the past or the future; nor can she think of objects she has hunted or will hunt in the future.

This description of non-human animal perception can be compared to Land's description of the content of human perception of an object: '[i]t is a solid, three-dimensional object, which (in the normal course of things) existed prior to my perceiving it and will continue to exist afterwards. [...] I am aware of perceiving a three-dimensional object with a temporal history.' (Land, 2011, p. 203) Non-human animals lack this awareness of temporal history.

One thing to note about this characterization of non-human animal perception is that it does not tell us very much about what it 'is like', to use Nagel's sense of the phrase (1974). Beyond the comparison with our own weak consciousness, I have made mostly negative points, listing the intentional achievements that are unavailable to non-human animals. This is to be expected given that Kant assigns a central role to embodiment in his account of cognition. Perception will be very different according to the different sense organs and biological structures of each animal. The only clear distinction that we can make between human and non-human animals is that our strong consciousness is governed by rules provided by the understanding. These rules put us into a present state of relating to the object of cognition, even when that object is not

immediately present. Unlike non-human animals, we can represent objects, and aspects of objects, to which we are not presently reacting.

### 3.10. Conclusion and remaining questions

According to Kant, imaginative synthesis is required to bring together the two stems of cognition – the active understanding and the passive sensibility. Both are needed for there to be intentionality at all, but both are very different in kind. I began this chapter by considering the suggestion that the active-passive nature of the body could help with an interpretation of Kant's account of synthesis – a suggestion that was quickly discarded by the commentators who made it. In response, I have shown that the cognitive subject's capacity for bodily activity is required to order the provision of bodily receptivity. Considerations of bodily activity provide a solution to the Problem of Intentionality. There are schemata associated with each concept, which are the rules governing correct bodily activity in relation to objects in space and time. This rule-governed bodily activity is neither a further mental item nor an unconscious sensation standing between the subject and objects of cognition. Instead, it institutes a causal relation between the subject and the object, through which the subject's attention is directed at the object. The suggestion is that sensibility is an embodied cognitive capacity, which provides the spatio-temporal structure of experience through bodily activity. The embodiment of the human cognizer means more than just the causal passivity by which the empirical manifold of intuition is received. The cognitive subject can only organize the passively received manifold through bodily activity.

In the following chapters, I develop this account of the embodiment of sensibility in two directions. The first question I address is about empirical self-consciousness. The transcendental unity of apperception is only an indirect representation of the subject, expressed through our capacity to attach the 'I think' to any of our cognitions. Crucially, unity of apperception is not unity in substance – it is not Cartesian unity, nor consciousness of unity in inner sense, but only unity in thought. As the indivisibility is in thought, Kant's arguments in the Paralogisms work against any claim to unity in substance. This leads to an issue that I briefly raised when discussing Kant's account of sensation. Kant allows that we can represent our own mental states

to ourselves. Thus, he allows an empirical access through inner sense to the self as an appearance in time, so there must be an empirical manifold involved. However, Kant claims that the self cannot be the affective object in inner sense, in the way that outer objects are for outer sense. This is because no intuition of the substantial self is given, but only intuitions of outer objects. Kant notes this issue in the Transcendental Deduction: ‘we intuit ourselves only as we are internally affected, which seems to be contradictory, since we would have to relate to ourselves passively’ (B153). Where does the empirical manifold for empirical self-consciousness come from, and how does this allow an appearance of the self in time? This is the question that I will explore in the next chapter (*Chapter 4*).

A second question that I want to address is: what is bodily activity? A general issue raised in the secondary literature on synthesis is whether Kant can coherently describe synthesis. Hatfield puts this in terms of a dilemma: describing synthesis as noumenal activity would be ‘violating [Kant’s] own stated prescription against claims to know noumena’, but ‘the transcendental synthesis presumably could not be phenomenal, for it is the process by which the phenomena of inner sense are first constituted’ (Hatfield, 1992, p. 212; see also the general dilemma for transcendental psychology posed by Kitcher, 1990, p. 21). Hatfield’s characterization of the second prong of this dilemma mentions inner phenomena, but it can be extended to include any account of synthesis in phenomenal terms, whether inner or outer. The question for Embodied Synthesis is: if synthesis makes spatio-temporality possible, how can it be spatio-temporal activity itself? This question is further complicated by what we have seen of bodily activity so far. I have argued that bodily activity is not sensation. I have also argued that bodily activity in its imaginative function is a ‘blind’ operation, suggesting that bodily activity is also not awareness of the body itself as a represented object. I also want to add that bodily activity is not equivalent to motion. I have used examples of moving eyes and fingers to support my argument. However, it cannot be a requirement that the cognitive subject needs to move in order to perceive. This is because, as Golob, Beck, and Van Cleve have suggested, we can perceive something at once. Say that I am completely still, have my eyes closed, and am just holding an object in my hands. In what sense is my body acting to arrange the sensations I receive? What makes this activity *bodily*? Could it not just be the activity of a cognitive subject who is a disembodied point of view?

This chapter has taken a first step towards answering these questions. The body enables us to make contact with all other objects through its activity. Any cognition will be a result of the subject's participation in the causal (i.e. rule-governed) interaction between all bodies. This suggests that bodily activity can be understood as causal activity, which is not equivalent to motion. Intentionality depends on a causal relation between the subject and the object, which is instituted through the causality of the body.

However, the appeal to causality raises a further problem. I have argued that the understanding needs to construct and apply causal principles which link the whole world of objects together in causal community. In his account of natural science in the *Metaphysical Foundations*, Kant suggests that embodiment presents an obstacle for the task of bringing objects together under a causal system. To achieve this task, we need to find out how each object relates to others in space. However, because of our bodily limitation to the here and now, we cannot directly access a single, all-encompassing resting point. We cannot perceive a background space which is not relative to a point of view, and so does not admit of a larger space to be found. Instead, Kant argues that the motions of bodies must be considered 'in accordance with the influence that the motion of the one can have on the change of state of the other, abstracting from all relation to the empirical space' (*MAN* 4: 545). This abstraction occurs by means of the regulative idea of absolute space, 'which is to serve as a rule for considering all motion therein merely as relative' (*MAN* 4: 559-60).<sup>37</sup> This regulative idea of absolute space provides rules for the understanding to reach the goal of the determination of motion relative to a background for which there is no further space. When we do natural science, we continually theorize about spaces beyond our own bodies, searching for larger or smaller relative spaces as we theorize about differently sized causal systems. This account of causation may seem to take us far from considerations of bodily activity in cognition. In *Chapter 5*, I argue that bodily activity in fact plays a central role in Kant's account. Bodily activity is a kind of causal activity, and it is only through the body that we come to know about causal activity in the first place.

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<sup>37</sup> On the distinction between constitutive and regulative ideas, see A644/B672.



## Chapter 4

# Embodiment and empirical self-consciousness in the Refutation of Idealism

This chapter considers the role of embodiment in Kant's account of empirical self-consciousness in the Refutation of Idealism. As my starting point, I look at existing suggestions that Kant appeals to embodiment as a necessary condition for the time-determination of empirical self-consciousness. I pose a problem for these readings, which assign the body both the status of an outer object in space and the epistemologically subjective status of being known immediately. A dilemma arises: if the body is an outer object, it seems that it cannot be known immediately; if the body can be known immediately, it is unclear how it can be an outer object. As a solution, I argue that the causally active role of our own bodies in cognition constitutes a subjective aspect of the body which does not undermine its status as an outer object. I suggest that the capacity for causal activity is required for the determination of empirical self-consciousness in time. However, I note two remaining problems for Kant's account of empirical self-consciousness in the Refutation. First, the argumentative constraints of the Refutation lead Kant to obscure the full contribution of the body to empirical self-consciousness. I suggest that a full account requires a look at Kant's comments on empirical self-consciousness in the Transcendental Deduction. Second, there is a tension in assigning a capacity for causal activity to the cognitive subject, which on Kant's account must also be spontaneous. This brings into focus the tension in Kant's account of the dependence of inner sense on outer sense.

### 4.1. Introduction

Kant's target in the Refutation is 'problematic idealism', a theory attributed to Descartes. According to Kant, Descartes claims that the existence of outer objects – those distinct from ourselves and our mental states – can 'only be inferred [...]

unreliably' as the cause of inner experience of ourselves and our own mental states (B276; see A368-80). As the inference from effect to cause is unreliable, outer objects remain 'doubtful and indemonstrable' (B274). Instead of shoring up this inference, Kant famously seeks to demonstrate that 'inner experience in general is possible only through outer experience in general' (B278-9). He begins with a claim that he takes to be acceptable to Descartes: empirical self-consciousness involves consciousness of one's own mental states in time. He argues that this temporal determination presupposes the existence of something persistent in space. If Cartesians take empirical self-consciousness for granted, they cannot doubt the existence of outer objects either.

This chapter investigates the role of the body in Kant's account of empirical self-consciousness in the Refutation. I focus on embodiment rather than the many other issues raised in the secondary literature on the Refutation, even the issue of whether Kant offers a successful answer to idealism. This is because although there is motivation for thinking that the body plays some role in empirical self-consciousness on Kant's account in *KrV*, the exact details of this role remain to be worked out and defended.

My initial motivation for thinking that the body must play a role in Kant's account of empirical self-consciousness is that much of our usual experience of ourselves has to do with the body. We take ourselves to be at the location of our body. The body is the locus and tool for our action, from pushing with hands to speaking with mouths and vocal cords. These considerations can be set against the puzzling result of an account of empirical self-consciousness which does not make reference to the body. Without any appeal to the body, the conclusion of the Refutation states that the self relies on consciousness of the persistent in space to order its mental life, yet does not identify with any particular object in space. Adrift in the outer world, this self seems little better than the self of problematic idealism, who is trapped in her own inner world. All that is left for empirical self-consciousness is consciousness of the existence of a unified sequence of perceptual states that are mine – a very austere reading of Kant's empirical self-consciousness which is offered by commentators such as Longuenesse (2006, p. 302). An embodied notion of empirical self-consciousness

would be much richer, involving consciousness of ourselves as embodied actors in the world. I will investigate how far Kant can get towards this richer notion.

Further motivation for examining embodiment in the context of the Refutation comes from the fact that several commentators have argued that Kant makes an implicit appeal to embodiment in the course of his argument. This claim is put in terms of an *implicit* appeal to embodiment, because Kant does not actually mention the human body in the Refutation. Nevertheless, these commentators read Kant as arguing that embodiment is a necessary condition for the time-determination of empirical self-consciousness. I call this claim the ‘Embodiment Reading’ (‘ER’) of the Refutation. As yet, there has been no overview and assessment of the different attempts to connect embodiment and empirical self-consciousness using the Refutation. In what follows, I provide this overview, revealing the pitfalls for an embodied account of empirical self-consciousness.

In §4.2, I assess the formulations of ER provided by several influential commentators on Kant. Some of these are merely hints about embodiment, so I try to spell out how a full reading of the Refutation might be given in each case. I show that the usual suggestion is that the body either functions as the perceptible substrate for mental states (Allison, 2004, Chapter 10; Guyer, 1987, pp. 312–314; Meerbote, 1987), or the mediator between mental states and the persistent in space (Cassam, 1993; Hanna, 2000; Nuzzo, 2008, Chapter 2; Robinson, 1981). Empirical self-consciousness in time consists in the ordering of mental states according to our awareness of the body playing one of these two roles. In §4.3, I pose what I call the Objective/Subjective Body Dilemma for these existing versions of ER. Previous proponents of ER have assigned the body the status of an outer object, providing our way out of the inner, all-mental world. But they have also assigned the body a special epistemological status, sharing in the immunity of subjective experience to Cartesian doubt by being immediately known. Insofar as the body is an outer object, it seems that it cannot be immediately known, and vice versa. In §§4.4-5, I develop my own version of ER and examine the implications for Kant’s account of empirical self-consciousness. I argue that the causally active role of our own bodies in sense perception constitutes a subjective aspect of the body that does not undermine its status as an outer object. In §4.6, I note two remaining problems for an account of the role of the body in empirical self-consciousness which is based on the Refutation. The first problem is that Kant

adopts a limited notion of empirical self-consciousness in order to answer the skeptic on their own terms. This obscures the full contribution of the body to empirical self-consciousness. Nevertheless, I suggest that Kant's discussion of self-affection in the Transcendental Deduction points in the direction of a full account. The more serious limitation is that there is a tension in Kant's notion of the cognitive subject as causally active but also spontaneous. I suggest that this brings into focus an existing tension in Kant's claim that inner sense depends on the existence of an object in outer sense.

## 4.2. The Embodiment Reading

To clarify where Kant is said to appeal to embodiment, I outline how I take the various proponents of ER to be inserting embodiment into the argument of the Refutation. I will reassess the premises of the Refutation when providing my own version of ER.

Kant begins with a claim about empirical self-consciousness: 'I am conscious of my existence as determined in time' (B275). Commentators have puzzled over how to interpret this. Some say that Kant is introducing a thin<sup>38</sup> notion of self-consciousness, which is the awareness of our experiences succeeding each other in a determinate temporal sequence (Allison, 1983, p. 289, 2004, p. 291; Chignell, 2017, p. 150; Dicker, 2008, p. 81; Guyer, 1987, p. 293). Others have a thicker notion of self-consciousness in view. To give two examples, Bennett characterizes empirical self-consciousness in terms of memory and knowledge of the past (1966, pp. 200–214), and Aquila suggests that Kant is concerned with consciousness of one's own diachronic identity and even knowledge about what we are (1979). The commentators I will be discussing use the thin notion of self-consciousness. This is because it is methodologically appropriate for Kant to assume as little as possible in order to meet the Cartesian skeptic on common ground. The skeptic is supposed to accept that we are immediately aware of our own mental contents in time.

After this first premise, Kant appeals to a result of the First Analogy of Experience: 'All time-determination presupposes something persistent in perception' (B275).

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<sup>38</sup> On the distinction between thick and thin empirical self-consciousness, see Allison (1983, pp. 289–291).

Something must persist, at least relatively, to serve as the substrate of changing outer states. In the Refutation, Kant extends this claim to the time-determination of inner experience. The determination of inner states in time also requires an enduring, perceptible backdrop.

Kant then argues that the perceptible backdrop is not ‘something in me’ (B275). This claim relies on the Paralogisms section of *KrV*. There, Kant argues that an ever-changing succession of representations appears in inner sense alone. There is no immaterial self, which as an inner persisting object would serve as the required backdrop. Kant also draws on his theory of time. There is no single representation which could serve as a backdrop, because this would just add one more item to the succession of mental contents (Bxxxix). Kant rejects the further option that time itself could provide the backdrop – as a form (i.e. formal condition) of intuition, it cannot be perceived (B224-5). Time itself cannot be an object in time. Thus, as the backdrop is not in inner sense alone, the only option left for the backdrop is that it is in space. This is because on Kant’s theory of sensibility, space is the form of presenting whatever is not just my own self or my mental states (B275). Kant concludes that inner experience presupposes the existence of something in space. This is not to say that an individual inner experience is always simultaneous with an individual veridical outer experience, but rather that some veridical outer experience must be had at some point – ‘inner experience in general is possible only through outer experience in general’ (B278-9).<sup>39</sup>

To sum up, the commonly discussed premises of the Refutation are as follows:

- (1) I am conscious of my existence as determined in time. (Cartesian premise)
- (2) All time-determination presupposes something persistent in perception. (First Analogy)
- (3) My consciousness of my existence as determined in time presupposes *x*: something persistent in perception. (from 1, 2)

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<sup>39</sup> For a detailed account of why Kant does not commit to this simultaneity claim, see Hanna (2000, pp. 162–163).

- (4) Objects are either just objects of inner experience, or else they are also objects of outer experience. (Theory of sensibility)
- (5)  $x$  is not just an object of inner experience: my own self, or my mental states. (The Paralogisms and theory of time)
- (6)  $x$  is an object of outer experience: something in space outside me. (from 4, 5)
- (7) My consciousness of my existence as determined in time presupposes something in space outside me. (from 3, 6)

Proponents of ER target premise (6),<sup>40</sup> claiming that what seems to be an appeal to outer objects in general is in fact an appeal to one's own body in particular – as either the perceptual substrate for change (what I call 'Substrate-ER'), or the mediator between inner objects and the persistent in space (what I call 'Mediator-ER'). I explain each in turn.

#### 4.2.1. Substrate-ER

According to Substrate-ER, the body itself functions as the perceptible backdrop in space for which Kant is arguing:

- (6a)  $x$  is my own body.
- (7a) My consciousness of my existence as determined in time presupposes the perception of my own persisting body. (from 3, 6a)

One approach to Substrate-ER is tentatively suggested by Allison, who offers a 'sketch' of the Refutation as follows (2004, p. 298):

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<sup>40</sup> An exception is Svare (2006). He targets (1), claiming that Kant's starting point is immediate consciousness of the body, which already demonstrates the reality of outer objects. However, Svare notes that this is not a reading of the Refutation, which adopts the Cartesian starting point of a sequence of apparently disembodied mental states. Thus, I will not discuss Svare. Similarly, I set aside Förster's argument for embodiment, which draws largely on the *Opus Postumum* rather than Kant's Critical work (Förster, 1985).

Kant hints at an argument showing that one's body functions as the persisting object with respect to which one's existence is determined in time. Presumably, the temporal order of one's mental states is determined by their correlation with one's bodily states [...].

Allison's suggestion is that the body is something that persists through changes in its states. The body thereby allows for the time-determination of the mental states which are 'correlated' with it. Allison does not make clear what manner of correlation he means, although earlier in his general account of the Refutation he claims that the persistent in space is a perceptible backdrop for the determination of objects (2004, p. 201). This suggests that the body plays the role of the perceptible backdrop.

One way of spelling out the 'correlation' between mental and bodily states is in causal terms. Guyer takes this approach, claiming that representations are determined in time insofar as they are simultaneous with, hence causally connected with, a series of states of an external object (1987, pp. 312–314). Whatever is related by causal connection needs to be in the same causal system. However, representations have no spatial location, and so cannot be in a causal system – a representation of something in space is not the same as something in space. So, the relation of simultaneity or causal connection holds between the object in space, and the persisting 'bearer' of representations – 'namely, the body of the perceiver' (Guyer, 1987, p. 312).

A stronger take on Substrate-ER is to claim that mental states inhere in the body as their substance. Meerbote offers a detailed argument for this position (1987, pp. 124–130). He appeals to the conditions of time-determination outlined in the Analogies, which tell us that only the states of a spatial substance can have determinate positions, duration, and succession in time. As inner states are determined in time, they must belong to a spatial substance – the human body.

Proponents of Substrate-ER all claim that the body is the enduring substrate for the determination of empirical self-consciousness in time, either as a material substance in which mental states inhere, or as a perceptible backdrop for the determination of change. The hope, I take it, is that the existence of the body is a sufficiently anti-skeptical conclusion, given that the Cartesian tradition doubts the

existence of any spatial object and typically uses the body as the paradigm of a dubitable object.

#### 4.2.2. Mediator-ER

Proponents of Mediator-ER claim that even though the perceptible backdrop does not have to be the body itself, the body is the means by which the persistent in space is perceived.

(6b)  $x$  is in space outside me, and perception of  $x$  presupposes embodiment.

(7b) My consciousness of my existence as determined in time presupposes something in space outside me, perception of which in turn presupposes embodiment. (from 3, 6b)

One approach to Mediator-ER, adopted by Hanna (2000), Nuzzo (2008, p. 68), and Robinson (1981, p. 396), is to claim that outer experience requires the ability to distinguish between regions in space. The claim is that we need a simultaneous feeling of the different sides of our own body, in relation to which we distinguish between differently orientated objects. The determination of empirical self-consciousness requires outer experience, which in turn requires awareness of one's own body.<sup>41</sup>

Another approach to Mediator-ER considers how outer perception is made possible through bodily organs. Cassam offers two arguments for ER (1993, pp. 118–120).<sup>42</sup> The first argument employs similar considerations of orientation to the commentators noted above. Cassam claims that visual perception of the orientation of objects requires experience of them in relation to an embodied point of view. The

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<sup>41</sup> Hanna singles out the body as the persistent in space, even claiming that it is a 'substrate' to which mental states need to be ascribed (2000, pp. 169–170). However, in a footnote he writes: 'This necessary ascription of conscious states to the body should not, I think, be construed as a token-token identity thesis [...]. Instead, I think that Kant anticipates the increasingly popular contemporary view that the human mind is an 'embodied mind' (2000, p. 169, fn. 30). Although he does not clarify how he takes these two contrasting views, I think that this points towards a Mediator-ER view rather than a Substrate-ER view.

<sup>42</sup> Cassam provides several arguments for embodiment in his works (e.g. 1993, 1997). I focus on those which fit the structure of the Refutation.



second argument is that outer perception requires representing the shapes of objects. Cassam claims that we cannot form the concept of shape without the sense of touch, which involves consciousness of one's own body. As empirical self-consciousness requires experience of shaped objects in space, it also requires consciousness of one's own body. Thus, Cassam suggests that perception of the persistent in space requires consciousness of one's own body.

Proponents of Mediator-ER claim that mental states are ordered in relation to the persistent in space through the body. Although the anti-Cartesian work is done by the resulting demonstration of the existence of the persistent in space, only our awareness of our own body allows us to get us in touch with this backdrop in the first place.

To sum up, proponents of ER claim that empirical self-consciousness as determined in time presupposes the embodiment of the subject of experience. They suggest that the Cartesian commitment to the indubitable status of empirical self-consciousness as determined in time implies the existence of some outer object as the necessary condition of such self-consciousness – whether the human body itself under Substrate-ER, or the persistent in space accessed through the body under Mediator-ER. They therefore take Kant's notion of empirical self-consciousness in time to consist in the ordering of mental states according to our awareness of the body playing its role as either substrate or mediator.

#### 4.3. A Dilemma for ER

In this section, I diagnose the many objections to ER in terms of what I call the 'Objective/Subjective Body Dilemma'. Previous formulations of ER have pulled the body in two directions at once, trying to assign the body the status of an outer object in space but also the special epistemological status of being known immediately. If the body is an outer object, it seems that it cannot be known immediately; if the body can be known immediately, it is unclear how it can be an outer object. I take each prong of the Dilemma in turn below, showing how the usual objections to ER arise.

### 4.3.1. Objective Body

The first prong of the Dilemma is that the body is an object in space. This is an obvious point, but it turns out to be difficult to uphold under ER. The problem is that if the body is an object of outer sense like any other, the Cartesian challenge still stands: all outer objects are equally doubtful. The body is known in the same way as other such objects, and so our knowledge of it is subject to the same epistemological conditions. We have no privileged knowledge of the body that would mean that embodiment is a necessary condition for the determination of empirical self-consciousness. I call this prong ‘Objective Body’.

Objective Body underlies two objections that have previously been raised for ER. First, there is the challenge that the Refutation is viciously circular (Guyer, 1987, p. 315; Robinson, 1981, p. 397). According to Kant, empirical consciousness of outer objects relies on the time-determination of subjective sequences (B164-5). So, consciousness of the body cannot be a condition for time-determination. This objection is a consequence of the body being an object in space like any other.

Second, it has been objected that awareness of the body is not necessary for empirical self-consciousness as determined in time. If Mediator-ER or Substrate-ER were true, then someone with no consciousness of her own body could not be aware of her mental states as determined in time. However, counterexamples to this claim to necessity abound, and indeed are to be expected if the body is just another dubitable object in space. These include cases of people born with no body sense, or who lose body sense (Aquila, 1979, pp. 277–278; Cassam, 1993, pp. 120–122; Longuenesse, 2017, p. 33). A particularly compelling example is the real-life case of the ‘disembodied lady’, recorded by Oliver Sacks (1998, pp. 47–48). A woman gradually lost her sense of her own body, eventually having no sense of touch or proprioception. She claimed she was able to ‘lose’ her own body parts: ‘I think my arms are one place and I find they’re another’ (*ibid.*). Despite this, the woman was empirically self-conscious in the sense under discussion in the Refutation – she was aware of her mental states as determined in time. Along similar lines, Strawson suggests that in a disembodied, purely auditory world, we would still be capable of empirical self-consciousness (1964, Chapter 2). These counterexamples show that the Refutation needs more than the contingent fact that one can use consciousness of one’s own body

to determine inner experience. But if the body is just another object in space, it is difficult to see how the body could have anything more than this contingent status.

The body is an object in space. However, it seems that it is known in the same way as any other outer object. This prevents there being a successful demonstration that the body is a necessary condition of the time-determination of inner experience.

#### 4.3.2. Subjective Body

As a corrective to the issues surrounding Objective Body, some proponents of ER have emphasized that the body has a special epistemological status, whilst still retaining its objectivity in space. The claim is that we have immediate awareness of the body, without relying on usual avenues of sense perception which are vulnerable to Cartesian doubt. This would help the Refutation to avoid vicious circularity – the body has a privileged epistemological status with respect to other objects. This also would help in response to counterexamples involving people who lack access to familiar features of the body, such as a sense of the positions of their limbs. All that is needed is immediate access to an abstract aspect of the body, in its role as substrate or mediator, which does not have to involve awareness of any of the familiar features of the body. This provides the second prong of the Dilemma: the body must have a special epistemological status, sharing in the immunity of subjective experience to Cartesian doubt by being immediately known. I shall refer to this second prong of the dilemma as ‘Subjective Body’.

On what basis do proponents of ER assign the body a special epistemological status? One line of argument adopted by proponents of ER is as follows. The claim is that we have experience of the body from within – an awareness sometimes called ‘body sense’. Body sense has distinctive features which imply that it is unlike any other experience of objects in space. It is more like a form of immediate self-consciousness. Cassam highlights two distinctive features of body sense (1993, p. 117). First, there is no possibility of failing to experience one’s body through body sense because of being in the wrong place. By contrast, I can fail to perceive an ordinary physical object because I am in the wrong place – perhaps because I am in a different room. Second, ascriptions of sensations and bodily positions through body sense are ‘immune to error through misidentification relative to the first-person

pronoun' (1993, p. 122). When I assert 'I sit on the chair' based on body sense, I could be mistaken in believing that the object under me is a chair, or that there is an object there at all. But I could not know through body sense that someone sits on a chair yet mistakenly believe that someone to be me. By contrast, there is always the possibility of error in the identification and re-identification of other objects in space. This appeal to a distinctive kind of body sense is also evidenced in Nuzzo's claim that we have a 'more original internal "feeling" of our body' than perceptual observation (2008, pp. 22–23), and Hanna's endorsement of the claim that we have a 'more basic perceptual grasp' of the body (2000, p. 171, fn. 52). Whatever is accessed by body sense is sometimes called the 'felt' or 'subjective' body.

The problem is that the felt body does not seem to be an object in space. To explain away the purported counterexamples to the necessity of body sense, proponents of ER claim that whatever we are aware of through body sense may not be the usual features of the body that we are aware of through our other senses. For example, Hanna writes that through body sense, we can be mistaken about basic features such as having limbs (2000, pp. 172–173); Nuzzo describes the felt body as 'pure' and 'ideal', even 'not visible' (2008, p. 154); and Cassam characterizes body sense as location-independent and immune to misidentification. It seems that the felt body is just a collection of sensations. We may have immediate access to these sensations. However, as I have argued in the previous chapter (*Chapter 3*), Kant has reason to deny that sensations are representations of space by themselves: '[S]ensation in itself is not an objective representation, and in it neither the intuition of space nor that of time is to be encountered' (B208). It is not just that body sense is awareness of some indeterminate spatiotemporal features, but rather that bodily feeling does not involve any spatiotemporal representation at all. This gives us reason to doubt that the felt body is in fact the object in space that it needs to be for the Refutation, which must demonstrate the existence of outer objects.

Subjective Body underlies two common objections to ER. First, the worry that body sense is not in fact perception of the spatially extended body has been raised by Longuenesse (2006) in response to Cassam's version of ER. This is also a recurring theme for critics of Nuzzo's work (de Boer, 2011; Shim, 2010).

Second, it has been argued that the felt body is incompatible with Kant's theory of the cognitive subject (Aquila, 1979, p. 276; Ginsborg, 2014, Chapter 9; Longuenesse, 2006, 2017, Chapter 2). On most readings of transcendental idealism, the subject of experience generates time and space as forms of representation, and so cannot itself be an appearance in time and space. The processes ascribable to body and subject differ. If we were to ascribe a cognitive capacity to the body, it would be the capacity for sensation. By contrast, the thinking subject must be spontaneous, hence free from causal determination. Subjective Body explains why it is so difficult to respond to this objection: the more proponents of ER downplay the contrast between body and subject by stripping the body of its spatio-temporal properties, the less it seems that they are talking about the body.

Another way to draw out the incompatibility between ER's subjective body and the Kantian subject is to distinguish body sense from Kantian self-consciousness, an objection explored in depth by Longuenesse (2006, p. 298ff.). She emphasizes Kant's insight that the 'I' of the 'I think' is neither a material object, nor a metaphysical subject, but has an altogether different status as a *logical* subject. The 'I think' can always accompany our conscious mental states, but never appears amongst them, and so provides no matter for intuition which would allow knowledge of the nature of the subject (A349; B157–8; B277ff.; B422–3). The 'I' only reveals that there is an active contribution of the mind to cognition, with the agent of this activity remaining unknown (B131-132; A400-1). Longuenesse interprets empirical self-consciousness determined in time as awareness of a unified sequence of mental states recognized as one's own. In other words, empirical self-consciousness as determined in time is just awareness of the result of the unifying activity of the mind. It is awareness of an inner, epistemological object – neither a material object in space, nor a metaphysical subject of mental states. Therefore, Kantian self-consciousness is never awareness of the body. To insist otherwise is to ignore Kant's wholesale rejection of knowledge of the metaphysical subject, whether material or immaterial, and his account of the active, non-referential 'I' of the 'I think'.

Longuenesse's criticism particularly targets characterizations of the 'I' as a metaphysical subject, corporeal or not. But in the context of Subjective Body, a more general criticism can be made. Even if the body could be accessed through a kind of

self-consciousness, this would render it an inner object, which would not be useful for the Refutation.

The subjective body seems incompatible with the objective body. But the body must be both for a successful Refutation, at least according to existing ER readings of the latter. No wonder, then, that ER has been plagued with vicious circularity, counterexamples, doubts about whether it is talking about the body at all, and the charge of incompatibility with Kant's account of the cognitive subject.

#### 4.4. A proposed solution: the active body

My task now is to investigate whether there is a version of ER that resolves the Objective/Subjective Body Dilemma and its accompanying objections. In §4.4.1, I address a commonly noted weakness in my initial formulation of the argument of the Refutation – the conclusion regards the representation of an outer object, rather than the existence of an outer object. I present an initial reformulation of the argument, which is still inadequate but makes clearer where an appeal to the body is needed. In §4.4.2, I provide the steps of the argument which include this appeal to the body. In §4.4.3, I consider what this new version of ER reveals about how far Kant can respond to the Cartesian skeptic.

##### 4.4.1. My reading of the Refutation

As a reminder, here are the premises of the argument we have been considering so far:

- (1) I am conscious of my existence as determined in time. (Cartesian premise)
- (2) All time-determination presupposes something persistent in perception. (First Analogy)
- (3) My consciousness of my experience as determined in time presupposes  $x$ : something persistent in perception. (from 1, 2)
- (4) Objects are either just objects of inner experience, or else they are also objects of outer experience. (Theory of sensibility)

(5)  $x$  is not just an object of inner experience: my own self, or my mental states.

(The Paralogisms and theory of time)

(6)  $x$  is an object of outer experience: something in space outside me. (from 4, 5)

(7) My consciousness of my experience as determined in time presupposes something in space outside me. (from 3, 6)

The problem is that there is a shift in (3), which puts the issue in terms of *perceiving* something persistent, to the required conclusion (7), which needs to talk of some persistent thing *existing* in space.<sup>43</sup> Thus, it could be argued that all Kant has shown is:

(7c) My consciousness of my experience as determined in time presupposes *perception* of a persisting object in space. (from 3, 6)

Kant himself recognizes this problem: ‘Against this proof one will perhaps say: I am immediately conscious to myself only of what is in me, i.e., of my representation of external things’ (Bxxxix-xl, note). He comments further:

From the fact that the existence of outer objects is required for the possibility of a determinate consciousness of our self it does not follow that every intuitive representation of outer things includes at the same time their existence, for that may well be the mere effect of the imagination (in dreams as well as in delusions). (B278)

Kant claims that the representation of a persisting object in space may merely be an imaginary effect, such as a dream of an object in space. He allows that the Refutation has not addressed the question of whether we are always in a state of imagination, merely hallucinating rather than veridically perceiving objects in space.

I think that addressing this problem starts us off on the right track for articulating the involvement of the body in the Refutation. Kant needs to connect merely imaginary

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<sup>43</sup> Many commentators have noted this problem (see e.g. Allison, 2004, p. 293; Chignell, 2009; Vogel, 1993).

space to the existence of outer objects. I will now provide my own reading of how he does this in the Refutation, showing that this is achieved through appeal to the body.

I begin by reassessing Kant's starting point in the argument of the Refutation. In a note to the argument of the Refutation, he directly addresses the possibility that we only ever merely imagine objects in space:

But it is clear that in order for us even to imagine something as external, i.e., to exhibit it to sense in intuition, we must already have an outer sense, and by this means immediately distinguish the mere receptivity of an outer intuition from the spontaneity that characterizes every imagining. For even merely to imagine an outer sense would itself annihilate the faculty of intuition [...].  
(B276–277 n.)

These two sentences are very compressed, but Kant mentions that in empirical self-consciousness, I introspectively attend to my own representational state. He refers to this in terms of how we 'exhibit' every representation, even representations of merely imagined objects, 'to [inner] sense in [inner] intuition' by the 'spontaneity that characterizes every act of imagination'. Kant's suggestion is that through this exhibition, I know I have a present state, even if I do not know whether true judgments can be made on the basis of the content of that state. Kant then refers back to the argument of the Refutation, arguing that something must be in space for me to be aware of a state in a moment of time: 'we must already have an outer sense' and the 'the mere receptivity of an outer intuition', or else this would 'annihilate' the 'faculty of [inner] intuition' – the capacity to apprehend in time.

I think that Kant adopts an even thinner notion of empirical self-consciousness than the notion of a succession of inner moments used by other proponents of ER. Kant's claim is this: given that we are conscious, we are aware of a moment in time even if we are in a hallucinatory state. This puts Kant in a stronger position than if he were to try to make some claim about our memory of a specific ordering of our mental states. To put it in terms of the evil demon scenario, the claim is that a demon could change the content but not the form of my conscious mental states. The demon could play around with the content and order of my conscious states, and my memory of the order of my conscious states. But this would not change my consciousness of those



states being in time. For example, it could provide me with the mere imagination (i.e. a hallucination) of a black triangle on the page in front of me: ▲. Judgments based on the content of this hallucination would be false, such as the judgment that there is a black triangle in front of me. Nevertheless, I would still have immediate awareness of my present conscious apprehension of a black triangle. Perhaps the demon could prevent awareness of time by preventing any conscious states from occurring. But then there would be no self-consciousness at all – a claim that even the Cartesian skeptic accepts is refuted by our immediate experience.

The skeptic could reply that the experience of time itself might be an illusion. However, I find it difficult to even formulate what experience would be without involving some temporal determination. The suggestion would have to be that our consciousness is unchanging and timeless, perhaps involving some temporally qualitative sensation such as expectation, which means that we wrongly take our own consciousness to be in time. But then questions would arise as to whether that illusory sensation is simultaneous with our consciousness, and whether it is unchanging. In answering these questions, temporal determination re-enters the theoretical account. Thus, I am not sure that the skeptic can make sense of the suggestion that time itself might be an illusion. The most we can coherently doubt is whether there is anything more than this present moment of consciousness.

Thus, Kant starts with the claim that I am conscious ‘of my existence as determined in time’, which just means consciousness of my own present experience. As Kant needs to meet the skeptics on their own terms, I take it that this is an even better first premise for his argument. Skeptics can question the veridicality of the content of my present state, including any present memory I have of the order of my past states. But they cannot question the temporality of self-consciousness. Thus, I offer the following reading of the first premise of the Refutation:

(1d) I am conscious of my experience occurring in one moment in time. (Cartesian premise)

Even a perception of a merely imaginary object in space must be in time. How does Kant then argue from this to the claim that something must exist in space?

The next premise is Kant's introduction of a condition for the determination of this moment of consciousness in time. Even though the First Analogy focuses on the determination of changing states in time, Kant's considerations still apply to the determination of a single state in time. He considers the suggestion that time begins in the present moment of consciousness and continues on in a succession of such moments. He writes, 'If one were to ascribe such a succession to time itself, one would have to think yet another time in which this succession would be possible.' (A183/B226) He rejects the suggestion because any present moment already has to be in time in order to be the beginning of a sequence, and all subsequent moments in the sequence also have to be in time. Thus, in positing a moment in time, we already are thinking of a time in which it would be possible. In other words, any present consciousness cannot be consciousness of the first moment of time. Rather it is consciousness of a continuation of time, a moment which stands in temporal relations to time before it.

How can I be presently conscious of a moment which is in relation to time before the present? Kant rejects the suggestion that time itself can do the task. This would be the suggestion that we could compare any present representation to time itself and thereby become conscious of the present as coming after other moments. This would require time to be a perceptible object in time, which would only raise the further question of how to relate the object of time to the time it is in. Instead, Kant claims that we are conscious of a moment in relation to time before the present only when something in our representation is present now but also extends into the past. In other words, something in perception needs to persist: 'this persisting thing in the appearances is the substratum of all time-determination' (A183/B226).

(2d) All time-determination presupposes something persistent in perception. (First Analogy)

(3d) My consciousness of my experience occurring in one moment in time presupposes  $x$ : something persistent in perception. (from 1d, 2d)

My reading of the next part of the argument follows the usual interpretations. Kant offers two options for the representation of the persistent thing. It is either entirely 'in me', whether as my own self or my own mental states, or else it is not only in me but also a thing outside me, as an object in space.

(4d) Objects are either just objects of inner experience, or else objects of both inner and outer experience. (Theory of sensibility)

As has already been discussed, Kant rejects the inner option. This is not to deny that mental states have some duration in time, such that I can have a hallucination of a black triangle for five minutes. Nevertheless, my consciousness of the occurrence of a mental state by itself, no matter how long it lasts, cannot tell me about what happened before it. I need something that makes my present consciousness possible: ‘my own existence in time can first be determined only through this persistent thing’ (B276). Thus, the persistent in perception cannot be an object of inner sense alone. Whatever connects my present mental state to the past cannot just be further mental states.

(5d)  $x$  is not just an object of inner experience: my own self, or my mental states.

(6d)  $x$  is an object of outer experience. (from 4d, 5d)

(7d) My consciousness of my experience occurring in one moment in time presupposes a representation of a persisting object in space.

At this point, it seems inadequate to rely solely on the theory of sensibility presented in (5d), according to which the only other option for an object that is not in me is that it is outside me. The worry is that (7d) leaves open the possibility that we have a merely hallucinatory or dreamt representation of something in space.

Raising the problem of the gap between the representation and the existence of the persistent in space, I suggested that Kant’s argument needs to be read as ruling out our having only hallucinatory states. I revised the opening premise of his argument as a result, showing that he has a very thin notion of empirical self-consciousness as awareness of a moment in time. Even so, we still end up with a claim in (7d) about the representation of an object in space. This clarifies where the argument of the Refutation needs to be supplemented. We need to show that any representation of space already presupposes the existence of something in space. Next, I show that this supplementary argument is where the role of the body is needed.

#### 4.4.2. Supplementing the argument of the Refutation

I suggest that the completion of the argument of the Refutation relies on two claims drawn from Kant's theory of space in the *Transcendental Aesthetic*.<sup>44</sup> This leads us to consider the role of the body in spatial representation.

The first claim is that every representation of space presupposes an *a priori* intuition of space. This is a presupposition of any concepts of space, as well as merely imaginary representations of space. Kant claims that 'the representation of space is a necessary representation, *a priori*, that is the ground of all outer intuitions' (A24-5/B39). We cannot represent anything in space without representing space itself, so the representation of space is presupposed by any experience of anything in space. He argues further that the *a priori* representation of space is an intuition, meaning that it is a singular, direct representation (A320/B377). A concept is a general representation of the marks exhibited by objects falling under that concept (A68/B93). This implies that a concept can be represented through each of its parts – in representing <four-footed>, <animal>, (and so on), we represent <dog>. By contrast, we can never represent space through the collection of its common parts, because space has an infinite number of parts. We must first have a direct *a priori* representation of 'a single space', before we can represent any parts of space: 'one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space'. (A24-5/B41) Thus, the *a priori* intuition of space is neither given through a concept of space, nor through the perception of an object in space. Both of these presuppose rather than provide the *a priori* intuition of space.

This leads to Kant's second claim, that space is instead represented by a capacity for bodily activity. It may seem that we have reached the end of human cognitive resources – space is neither provided in sensibility, through which objects are

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<sup>44</sup> These are claims that Kant will also use to address Berkeley's dogmatic idealism, which Kant characterizes as the claim that space, hence all spatial objects, are merely imaginary. Kant's reply in the *Transcendental Aesthetic* similarly relies on the claim that space is a form of intuition. The difference is that the Berkeleyan idealist makes a metaphysical claim, denying the reality of space and objects in space, whereas the Cartesian skeptic takes the epistemological approach of questioning whether we can know that objects in space exist.

perceived, nor in the understanding, through which objects are thought by means of concepts. But Kant introduces a third option, synthesis. He claims that without synthesis ‘we could have *a priori* neither the representations of space nor of time’ (A99-100), and not ‘even the purest and most fundamental representations of space and time’ (A102). Synthesis is sometimes thought of as merely mental activity of putting representations together in the mind. However, Kant’s arguments in the Transcendental Aesthetic rule out the option that space can be represented through putting concepts or representations of space together in the mind. These concepts and perceptions already presuppose a representation of space.

Instead, I propose that we interpret synthesis as bodily activity which directs attention. For example, a single movement of a finger from point A to point B is a continuous bodily performance which directs attention to a line AB. This directs my attention to a single, yet infinitely divisible, part of space. It is through this capacity for bodily activity that we have an *a priori* intuition of space. This capacity is *a priori* insofar as we depend on our action to represent space, rather than any particular sensory reaction or experience which results from it. This capacity also provides an intuition of space, insofar as every representation of space, even an imaginary space, is a representation of a single space of all possible bodily activity. Therefore, every representation of space is dependent on the capacity for bodily activity. I should also clarify that this does not imply that we are aware of bodily activity in every representation of space. Kant claims that we are usually not conscious of the activity of synthesis – it is ‘a blind though indispensable function [...] without which we would have no cognition at all, but of which we are seldom even conscious’ (A78/B103).

How does the capacity for bodily activity, which is the condition for any representation of space, relate to the time-determination of empirical self-consciousness? Kant points towards the answer in Note 2 on the Refutation. He writes that ‘we perceive all time-determination only through the change in outer relations (motion) relative to that which persists in space (e.g., the motion of the sun with regard to the objects on the earth)’ (B277-8). This draws on his characterization of the determination of simultaneity in the Third Analogy, in which he uses the example of directing attention to the moon and then to the earth (B256-7). Kant claims that time-determination requires the construction and applications of rules that treat any

representation of an object in space as a representation of a state of something persisting. Under such rules, it is correct to act towards whatever affects us as a property of an object in space that has existed in the past, and continues to exist even when it is not immediately present. Through acting in relation to this persisting object, we can determine its relative position in space and time with respect to all other persisting objects (A213/B260). In every representation of space, my capacity for bodily activity institutes a relation between me and the state of some persisting object in space. I am aware that I am now representing a state of something in space which has a past. This allows me to be conscious of the present moment in time in relation to a time before the present.

Putting these two claims about space together, I can formulate the next steps of the argument of the Refutation. The previously discussed premises (1d)-(7d) show that consciousness of a moment in time is dependent on a representation of something persistent in space. In this section, I have argued that every representation of space depends on an *a priori* intuition of space through the capacity for bodily activity. This same capacity for bodily activity allows us to be in a relation to some persisting object in space, with respect to which we become conscious of our own experience in time. To deny that I am in relation to anything at all in space would be to deny that my present mental state is in relation to past time. Thus, a necessary condition for empirical self-consciousness is as follows: I need to be in relation to at least one persisting thing in space through my capacity for bodily activity.

Reading Kant's argument with the possibility of merely imaginary space in mind, I have shown that there is an important role for the body to play in the time-determination of empirical self-consciousness. The argument of the Refutation leads us from our empirical self-consciousness as determined in one moment of time, to the conclusion that there is a relation between the cognitive subject and some persisting object in space through the capacity for bodily activity.

(8d) Every representation of an object in space presupposes an *a priori* intuition of space through my capacity for bodily activity.

(9d) In every representation of an object in space, my capacity for bodily activity institutes a relation between me and some persisting object in space.

(10d) Every representation of an object in space presupposes a relation instituted by my capacity for bodily activity between me and some persisting object in space. (from 8d, 9d)

(11d) My consciousness of my experience occurring in one moment in time presupposes a relation instituted by my capacity for bodily activity between me and some persisting object in space. (7d, 10d)

This conclusion does not look exactly like Kant's conclusion in the Refutation, which does not mention any relation between me and the persisting object. Before connecting my reading of the Refutation to broader discussions of ER in §4.5, I want to explain why I think my reading remains true to the spirit of Kant's aim in the Refutation.

#### 4.4.3. What is the conclusion of the Refutation?

Kant himself admits that the Refutation does not rule out the possibility of at least some non-veridical perceptions: 'from the fact that the existence of outer objects is required for the possibility of a determinate consciousness of our self it does not follow that every intuitive representation of outer things includes at the same time their existence, for that may well be the mere effect of the imagination (in dreams as well as delusions)' (B278). Is this too weak a conclusion for a reply to the Cartesian skeptic?

I think that any stronger conclusion would overstep the mark, given that we should still allow that we can sometimes dream and hallucinate. Arguably, Kant just wants to defend a principled distinction between actual objects, and the objects of non-veridical perceptions. This can be seen from the context of the Refutation in *KrV*. The Refutation is in a section called the Postulates of Empirical Thinking in General, in which Kant discusses actuality (*Wirklichkeit*). He defines actuality as 'that which is connected with the material conditions of experience (of sensation) (B266). In other words, the application of the category of actuality is governed by a very general rule, according to which it is correct to act to direct attention so as to receive sensations. Under this principle, whatever we represent through such action – that is, whatever is represented through sense perception – is counted as actual.

In the Postulates, Kant expands his principle of actuality in order to explain how there are actual objects which we cannot perceive, such as the theoretical entities of natural science (A225/B273). He explains that these objects can still be counted as actual. This is because they can be connected to our perceptions through empirical laws based on the *a priori* principles of relation outlined in the Analogies. These empirical laws are ‘rules for proving existence mediately’ (B274). These laws connect theoretical entities to perceptions, thereby proving them to exist. In the Analogies, Kant defends the *a priori* principles on which these laws are based. He argues that the principles of relation are already presupposed in the representation of objects and events. The organization of the manifold of intuition in time and space depends on the cognitive subject’s construction and application of *a priori* relational principles. This is to be contrasted with any account on which the subject must build up to these principles by first organizing the manifold. On Kant’s expanded principle of actuality, veridical representations of actual objects are those which are connected by empirical laws to procedures for sense perception. This distinguishes actual objects from objects of non-veridical perceptions. The implication is that objects exist independently of our present perceptions of them, but not independently of the empirical laws by which all objects are related.

The Cartesian skeptic challenges Kant’s expanded principle of actuality by raising the possibility that we are always dreaming or deluded – albeit in a very structured way. This implies that the connection to sensation does not distinguish actual objects from the objects of non-veridical perceptions. Kant adds his Refutation of Idealism to the Postulates to respond to this challenge: ‘a powerful objection against these rules for proving existence mediately is made by idealism, the refutation of which belongs here’ (B274).

The context of Kant’s discussion of actuality helps us to clarify what he is aiming at with his argument in the Refutation. Kant argues that the only way we can present our own representations in time in empirical self-consciousness is through a cognitive relation to a persisting object in space. The only way we can be in such a relation is through our capacity for bodily activity. To return to the evil demon scenario, an evil demon could change the content but not the form of my representations of space. The demon could provide hallucinations of objects in space, misleading me as to the



location of objects and even my own position. However, the demon cannot provide a hallucinatory form of space itself. This form is dependent on the embodied capacities of the human cognitive subject. For example, in the case of my hallucination of a black triangle, I am not in any bodily relation to a black triangle. But I am still dependent on my *a priori* intuition of space through my capacity for bodily activity. There must be something in space to which I am now in a bodily relation, by virtue of spatiality of the hallucinatory state rather than any of its content. The only thing the demon could do to change my form of space would be to remove my capacity for bodily activity, thereby preventing me from having an *a priori* intuition of space. However, this would also rule out not only any imagination of an object in space, but also the possibility of empirical self-consciousness as determined in time. Given that we do have such empirical self-consciousness, we must be in connection to something actual in space.

All this is to say that Kant counters the Cartesian skeptic with his own idealism. On Kant's account, actuality is limited to whatever can be related to the subject's cognitive capacities for spatio-temporal determination. The skeptical challenge cannot make us revise this principle of actuality without denying these cognitive capacities altogether, which would rule out the possibility of experience in time. This also explains why Kant does not defend particular empirical judgments and laws from skepticism. After commenting that dreams and delusions are still possible, he explains that they are 'possible merely through the reproduction of previous outer perceptions' (B278). There are many circumstances in which I must revise my empirical judgments and my beliefs about empirical laws, because individual perceptions may turn out to be non-veridical. But we can make a principled distinction between non-veridical perceptions and perceptions of actual outer objects, because the former are merely reproductions of perceptions, rather than representing an object according to genuine law-governed relations. These empirical laws are based on the *a priori* relational principles constructed and applied by the cognitive subject.

#### 4.5. Addressing the Dilemma

I now address the Objective/Subjective Body Dilemma that I raised for previous versions of ER. The Dilemma shows us that previous versions of ER assign

incompatible roles to the body. In general, according to proponents of Substrate-ER, we must be aware of the body as the perceptible backdrop for change, or as the bearer of mental states. However, this seems to relegate the body to just another dubitable object in space. Proponents of Mediator-ER stress the body's participation in causal connections, yet ultimately take recourse in a subjective body which seems divorced from its usual spatial properties.

My reading has some shared features with previous versions of ER. I follow the general form of arguments for Mediator-ER, adding a further bodily condition for the representation of space. Like Hanna, Meerbote, and Guyer, I appeal to the causal community of the body with other objects in space. However, I disagree with previous proponents of ER on several key points. According to Allison, Hanna, Nuzzo, Robinson and Cassam, the determination of empirical self-consciousness requires a special awareness of the body. I claim that only the capacity for bodily activity is required, not awareness of it. According to Meerbote, the determination of empirical self-consciousness requires that mental states inhere in the body as their substance. On my reading, Kant does not make any such claim about the materiality of the cognitive subject. Furthermore, Hanna, Meerbote and Guyer only talk about the body as causally passive. My version of ER emphasizes the causal activity of the body in determining other objects. How do these differences help me to address the Dilemma? I think that my version of ER allows Kant to capture what previous versions of ER were trying to get at in assigning both objectivity and subjectivity to the body, without the Dilemma arising. I will take each aspect in turn.

#### 4.5.1. The subjectivity of the active body

The capacity for bodily activity reveals a subjective aspect of the body, although not the subjectivity that previous proponents of ER have proposed. I have argued that the body that Kant appeals to in the Refutation is neither the perceptible backdrop for change, nor a felt body. Instead, the body plays an active role in cognition, determining our spatio-temporal experience through its activity. In this function, the body takes on the role of the determining subject of experience, rather than just being a determined object of thought and experience. This is not the same as the usual claim of proponents of ER, that we have a special epistemological access to the body. Rather than being

subjectively known, the body is subjective insofar as the capacity for bodily activity is a capacity of the determining subject of experience.

An illustration of this capacity can be found in the *Metaphysical Foundations*. There, Kant further develops his account of the causal community of objects described in the Analogies. To do so, he uses the example of a perceiver inside a ship, watching a ball on a table. The ball is not moving in relation to her, so she sees the ball as being at rest. Looking out the window, she realizes that the ship is moving along the riverbank – and her along with it. She now sees that the ball is also moving. Kant claims that what seems to be at rest from one point of view can be shown to be in motion from another, relative to a different background space. Even the riverbank could be shown to be moving relative to the rotating Earth. Admittedly, in the context of natural science, embodiment is initially a problem, ruling out direct perceptual access to a space beyond the ever-increasing sequence of relative spaces. All we have is a regulative idea of absolute space, which provides rules for the understanding to reach the goal of the determination of motion relative to a background for which there is no larger space. When we do natural science, we think about a series of larger and larger relative spaces as we theorise about differently sized causal systems. I will have more to say about natural science in the next chapter, but for now I want to note that Kant allows embodiment to take on a positive role in the everyday context of sense perception. The task demanded by the regulative idea of absolute space is performed by the body, rather than mental theorization about causal conditions. The body generates a relative space through its activity, against which objects of perception are determined. This relative space is not one single persisting object, such as a table-top or a riverbank, nor even the body itself. Rather, it is defined by a region of bodily activity, the space of causal relations between the perceiver's body and other objects. In Kant's example, the subject reduces the motion of the ball to rest relative to her own body when in the cabin of a moving boat. This picture of the determination of objects through the activity of the body is already there in the conclusion of the Refutation, which posits the subject and object in causal relations to each other. The body provides a causally active aspect which the cognitive subject needs to have in order to determine objects in space around her.

A more recent example from embodied cognition literature is the Outfielder Problem (Anderson, 2003; A. D. Wilson & Golonka, 2013). Consider an experienced baseball player running to catch a ball that has been hit into the air so that it decelerates in an upwards curve until it reaches a maximum height, then accelerates as it falls back down. We might think that players register the initial conditions of the ball, make calculations to predict where the ball will fall, then run in a straight line to that predicted location. However, experiments reveal that players move in such a way as to manipulate the appearance of the ball's motion – either moving along a curved path towards the ball so that it appears to move in a straight line, or accelerating and then decelerating so that the ball appears to move at a constant velocity. In Kantian terms, the player uses the activity of her body in relation to the ball to reduce the motion of the ball to relative motion. I use these cases of motion for simplicity, but other experiments suggest that we also determine size and shape by acting on objects, such as lifting and moving them around. This ability is impaired if we are limited to only the passive reception of affects through sensations like pressure (Turvey, 1996). These examples are cases of the cognitive subject determining other objects in space and time through her bodily activity.

As a first part of my proposal, I thus argue that the body Kant appeals to in the Refutation is subjective in this sense: the capacity for bodily activity is a cognitive capacity of the subject herself. Through its activity, the subject's own body determines other objects in space and time. This is achieved without the subject having to first perceive her body as a spatio-temporally determined object. The cognitive subject does not first look at her own body, then look at the ball, and then predict how each object will move. Instead, the cognitive subject just moves in relation to the ball, thereby determining the motion of the ball. In these cases, the body is not just another object perceived by the subject, but takes on the role of the determining subject of experience through its activity.

#### 4.5.2. The objectivity of the active body

I now argue that, in addition to its subjective nature, the body that Kant appeals to in the Refutation also has an important objective dimension: the capacity for bodily activity presupposes a body in space. This may seem like an obvious point, but I consider it in light of the following objection. Say that we accept that the cognitive

subject needs the capacity to be active in space, as elaborated upon in the previous subsection. It may still be asked: what makes it the case that the capacity for bodily activity requires an extended body in space, rather than a geometrical point of view? Why do we have to be talking about the body with its hands, legs, and so on?

To answer this question, I think that we can draw on Kant's theory of matter, in which he connects the causal activity of material objects to the determinate properties brought about as the result of this activity. Kant's theory of matter is neither a premise nor the conclusion of the Refutation. The Refutation just shows that the capacity for bodily activity is necessary for the time-determination of empirical self-consciousness. Nevertheless, Kant provides an auxiliary argument showing that all material bodies are dependent on such activity. I will outline the relevant points of Kant's theory of matter, leaving a full development for the next chapter (*Chapter 5*).<sup>45</sup>

Kant uses 'objects of outer sense' and 'matter' interchangeably (A22/B37). In *MAN*, he claims that matter plays the role of phenomenal (not noumenal) substance, persisting through all changes in objects in space (A144/B183). According to Kant, each part of matter is constituted by forces which are entirely defined in terms of their effects when brought into relation to other parts of matter – either attracting or repelling these other parts (*MAN* 4: 498). Attractive and repulsive causal forces 'make possible' the filling of space (*MAN* 4: 518). Thus, causal forces are the real essence<sup>46</sup> of matter:

A property on which the inner possibility of a thing rests, as a condition, is an essential element thereof. Hence repulsive force belongs to the essence of matter just as much as attractive force [...]. (*MAN* 4: 511)

Kant's essentialism about matter implies a causal power model of causation. The forces of an individual part of matter ground its properties, including the causal laws governing its interactions with other parts of matter. Thus, a cause can be defined as the power of a part of matter to act in accordance with its real essence – its forces – to

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<sup>45</sup> For this account of matter, see Stang (2016, Chapter 8); Watkins (2004); Langton (2001, pp. 175–178, 2018; Langton & Robichaud, 2010).

<sup>46</sup> See Stang (2016, p. 234) on the contrast with logical essence, which grounds whatever is contained in a concept of a thing.

determine changes in states of other parts of matter. This ascription of causal power to individual parts of matter is to be contrasted with accounts of causality as a relation between events.<sup>47</sup> According to Kant, bodies continuously act to repel and attract each other, and this is how they fill space. In other words, matter fills space through causal community – interaction through causal forces.

The Refutation demonstrates that the subject has the capacity for bodily activity. Bodily activity constitutes the properties of the body as a material object. Like other bodies, the human body is defined in terms of its causal interaction with other objects, by which it gains determinate extension and location in space: ‘a body [...] is a matter between determinate boundaries (which therefore has a figure)’ (*MAN* 4: 525). Thus, the bodily capacity for activity and the objects it relates us to cannot be reduced to a merely geometrical point of view. Instead, it fills space, as a body in space. This demonstrates the objectivity of the capacity for bodily activity – it presupposes a body in space.

#### 4.5.3. Responding to objections to ER

My Embodiment Reading relies on carefully distinguishing between the activity of the body, and our awareness of the activity of the body. This allows Kant to avoid assigning incompatible roles to the body. On my reading, the Refutation shows that the capacity for bodily activity is necessary for the determination of empirical self-consciousness in time. Kant does not appeal to the perception of bodily activity or of the body itself. The time-determination of empirical self-consciousness does not depend on any particular perception of the body, but rather on the general embodied capacity to represent space. Unlike appeals to the felt body under previous versions of ER, the capacity for activity is an aspect of the body which does not compromise its status as an outer object, but rather is fundamental to this status. Thus, I avoid the Objective Body prong of the Dilemma: the body is an object in space, but the capacity for bodily activity is the capacity of the subject of experience. I also avoid the Subjective Body prong: Kant is not claiming that we have any special epistemological

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<sup>47</sup> See A204/B249-50. For further discussion, see Watkins (2004, Chapter 4).

access to the body as an object in space, but rather that we are able to perceive other objects in space through the bodily capacity for activity.

I turn now to the usual objections to ER, mentioned in §4.3. One issue was that the appeal to empirical consciousness of the body, which is just another object in space, renders the Refutation viciously circular. My distinction between bodily activity and awareness of it helps me to respond to this objection. On my reading, Kant appeals to the capacity of bodily activity as a condition for spatial representation, rather than any empirical consciousness of the body. Thus, he avoids appealing to something which itself needs determination in time, in order to account for the time-determination of empirical self-consciousness. Nevertheless, I have suggested that the Refutation does involve something of a concession to the skeptic's position. Kant offers his own idealism in the place of Cartesian skepticism. The representation of anything in time and space is dependent on the cognitive capacities of the subject. Objects exist independently of particular perceptions of them, but not independently of the empirical laws by which all objects (including the body itself) are related.

The second objection to ER was that embodiment is not a necessary condition for empirical self-consciousness. In §4.3.2, I posed the objection as follows: if ER were true, then someone with no awareness of her own body could not be aware of her mental states as determined in time. I considered several counterexamples that were used to show that this is not the case. In response, I can employ my distinction between the bodily capacity for activity, and any awareness of the body through sensation or perception. The counterexamples involve reduced capacities for bodily sensation, even a lack of proprioceptive awareness of the location of one's limbs, but not loss of the capacity for bodily activity. For example, the so-called disembodied lady is unaware of the shape and position of her own body, and has reduced capacities for action, but she is still active in space through her body. So, she is not really disembodied after all. Similarly, Strawson puts the case of the auditory-only world in terms of a cognizer with no body sense. As my version of ER does not claim that awareness of the body is necessary, but only the capacity for bodily activity, it does not fall foul of these counterexamples.

There is some empirical evidence for the distinction between the proprioceptively sensed body and the capacity for bodily activity. For example, Kammers et al. have

conducted an interesting experiment involving the rubber hand illusion (2009). In the usual rubber hand illusion experiments, a subject rests their arm on a table. The subject's arm is hidden by a screen, and a rubber hand is placed in their field of vision such that it looks like it could be in a natural position for the subject's hand. When the rubber hand and the real hand are stroked for 90 seconds, many subjects reported that the felt location of the stroking is where the rubber hand is – they locate the rubber hand as a part of the felt body. Kammers et al. added a further stage to these experiments, asking subjects to reach for objects with their hidden hand. Even though the rubber hand illusion persisted during and after this action, it had no effect on their capacity to reach for objects. This suggests that there is a distinction between proprioceptive awareness of bodily position, and the capacity for bodily activity. Even when we have an altered, illusory sense of bodily position, this does not change our capacity for action. A further implication is that the embodiment required for empirical self-consciousness may not be what one expects from perception of one's body (or lack thereof). One does not have to be able to move in order for one's body to be causally active, as in the case of an object resting in one's hands. The capacity for action is part of the structure of empirical consciousness as determined in time, rather than *awareness* of the body and its active capacity.

What if the counterexamples were restated in terms of a lack of bodily activity? For example, the auditory-only world would be one in which the subject has with no capacity for bodily activity but nevertheless constructs an auditory field as a replacement for the spatial field. I think that the Refutation provides a reason to bite the bullet and claim that cases like these are not in fact examples of perception in the absence of the capacity for bodily activity. A subject with no capacity for bodily activity would have no capacity to arrange her auditory sensations in time. In fact, the auditory-only scenario only seems like a possibility because the role of the body has been neglected in ordinary cases of auditory perception. The perceiver arranges her perceptions through her body, which in the case of auditory perception requires her ears.

To sum up the response to the second objection, Kant's claim is that the capacity for bodily action is necessary for empirical self-consciousness as determined in time. The purported counterexamples do not challenge this claim.



The third objection to ER is that whatever plays the role in connecting us to the perceptible backdrop is not after all an object in space. This objection was primarily aimed at proponents of ER who appealed to body sense, as a special subjective access to the body. I have not relied on body sense in my reading of the Refutation. Instead, I argued that the capacity for causal activity is required for the time-determination of empirical self-consciousness. As causal activity is also a fundamental feature of objects in space, Kant is not in danger of undermining the status of the body as an object in space.

Thus, on my reading of the Refutation, we can answer three of the four common objections to ER. However, I think that two problems remain – the last of the four objections, and a further question regarding the role of the body in empirical self-consciousness.

#### 4.6. Remaining problems

There are two remaining problems for Kant's account of empirical self-consciousness. One is more serious than the other. To take the less serious problem first, the most that can be said from the Refutation is that bodily activity is required for empirical self-consciousness. This does not involve any awareness of our own bodies, which was a crucial part of my account of how Kant can avoid the Dilemma and thereby avoid assigning incompatible roles to the body. However, this account of empirical self-consciousness does not seem to satisfy my initial motivation for inquiring into embodiment. I suggested that without any privileged relation to our own body, the Kantian empirical self seems little better than the self of problematic idealism, who is trapped in her own inner world. Is empirical self-consciousness just awareness of one's own mental states in time?

In response, I think that Kant adopts a very thin notion of empirical self-consciousness in order to meet the Cartesian skeptic on their own terms. The result is a limited conclusion regarding the role of the body in the Refutation – only the capacity for bodily activity is necessary. Nevertheless, Kant offers separate considerations that show that awareness of bodily activity does come into empirical self-consciousness.

In the B-Deduction, Kant considers the provision of content for empirical self-consciousness. He poses a puzzle regarding the provision of the content of inner experience. In general, the representation of an object requires the affection of the senses by that object – this provides the manifold of intuition, the material (*Stoff*) for cognition. In the case of inner sense, what is the affective object? Going back to Kant's argument in the Paralogisms, which he also relies on in the Refutation, there is no persisting self which could serve as an affective object (A381). The 'I' of the 'I think' only expresses a logical subject of thought which does not count as a cognition, let alone an empirical cognition, because it lacks any intuitive content (whether pure or sensible). As Kant writes, we need 'intuition, and in this case inner intuition, i.e., time, in regard to which the subject must be determined' (B277). However, we seem to be left only with a series of mental representational states in time. In the B-Deduction, Kant puts the problem as follows: 'we intuit ourselves only as we are internally affected, which seems to be contradictory, since we would have to relate to ourselves passively' (B153-4). We need to have a passive relation to representational states in order to receive a manifold of inner intuition. But we also need an active relation to these states for them to appear to us in the first place. How can we at once passively and actively relate to our own states?

In answer to this question, Kant writes:

Under the designation of a transcendental synthesis of the imagination, [the understanding] therefore exercises that action on the passive subject, whose faculty it is, about which we rightly say that the inner sense is thereby affected [...]. [A]ny determinate intuition [in inner sense] is possible only through the consciousness of the determination of the manifold through the transcendental action of the imagination. (B153)

Kant claims that the affection of inner sense occurs during synthesis. The determination of inner sense involves *consciousness* of the activity of synthesis which determines the manifold. In empirical outer cognition, our attention is directed towards the object of representation through the (usually unconscious) activity of synthesis, and we are unreflectively conscious of the contents of our representational states in inner sense. In empirical self-consciousness, our consciousness of that same activity of synthesis directs our attention towards our own representations and their order of

appearance. The provision of the content of inner experience – that is, our ability to passively relate to something in inner sense – depends on the synthesis at work in outer experience that actively relates us to objects in space. Furthermore, the shift in attention required to change from unreflective to reflective consciousness is achieved through consciousness of that same synthesis.

Through synthesis, we become reflectively conscious of our own representations. This means that we have inner experience, rather than being limited to either inner sensations or else looking straight through the self to outer experience. Instead of perceiving the ship high in the stream, then in the middle of the stream, I can become conscious of the perceptions themselves (of the ship high in the stream, and so on). Empirical self-consciousness depends not on what I think about objects, nor just on the persistence of some object in space, but rather on what I do in relation to objects. The reflective content of representing my own representations only comes through my awareness of performing the relevant actions in relation to the objects of perception. In empirical self-consciousness, I am aware that I look first at the door, then the window, then the roof. I am aware that I watch the ship go downstream, rather than looking at one ship upstream, then turning my head to look at another ship downstream. This is an individuating self-consciousness, allowing awareness of a sequence of mental states as mine because I did those actions and no one else. Thus, consciousness of one's own bodily activity as an imaginative process provides the reflective content of empirical self-consciousness.

Kant's full notion of empirical self-consciousness is characterized in terms of awareness of bodily activity. I think that this helps to assuage worries that his notion of empirical self-consciousness sets the self adrift in the outer world of objects. Outside of the argumentative constraints of the Refutation, the way is open to showing that a lot more goes into empirical self-consciousness than the skeptics allow. Empirical self-consciousness involves an embodied subject who is not only active in the world, but also aware of herself as such. This thick notion of empirical self-consciousness is not equivalent to awareness of a unified sequence of mental states. It is not like finding out what happens by watching a series of snapshots that have been put together into a movie reel. Rather, it is like being onstage as an actor, being aware of what one is doing. It is the subject's awareness of herself as active in the world.

However, for methodological reasons, Kant cannot appeal to this thick notion of empirical self-consciousness in his argument of the Refutation. Thus, proponents of ER are right to look for a thinner notion as Kant's opening premise. But they are wrong to try to derive any thicker notion involving awareness of the body as the conclusion of the argument of the Refutation. The thicker notion of empirical self-consciousness, which includes awareness of one's own body, is not immune to Cartesian doubt. Awareness of the body is not a necessary condition of the time-determination of empirical self-consciousness. Kant's distinction between the thin and thick notions of empirical self-consciousness, and the corresponding distinction between bodily activity and awareness of bodily activity, is ignored at the cost of facing the Dilemma.

The more serious problem is the remaining objection which was already raised for existing versions of ER. On my reading, the conclusion of the Refutation shows that the cognitive subject needs the capacity for bodily activity. However, he also claims that the cognitive subject is spontaneous, acting freely from any external causes in the spatio-temporal world. Discussing embodiment in the context of the Refutation helps to bring out this existing tension in his demonstration of the dependence of the inner mental life of the cognitive subject on her interaction with objects in space. It might have been thought that Kant does not have to characterize sensibility in embodied terms when it comes to inner sense, because it is the form by which the cognitive subject represents objects in time alone. However, the Refutation shows such a suggestion to be inadequate. Kant demonstrates that the capacity to represent time depends on the capacity to represent space. Insofar as the spatial capacity is embodied, the temporal capacity is too.

I suggest that Kant refuses to reify either of the conditions of empirical and transcendental self-consciousness, material activity and mental spontaneity respectively, into a traditional substantial self. To explain further, I want to compare Kant's accounts of empirical self-consciousness and transcendental self-consciousness. First, both have several parallels. It is widely recognized that Kant's transcendental self-consciousness ascribes more to the subject of experience than his predecessors allow: a unifying function of the mind, which is not a mere abstraction, but a genuine contribution to cognition. Just as transcendental self-consciousness reveals the role of the activity of the mind in thought, empirical self-consciousness as

determined in time reveals the role of the active body in relation to the object of perception. The ‘I think’, the mark of the activity of the understanding, does not in fact accompany every state, because I am not always thinking about thinking. But it can be attached to any of my mental states – when I do reflect, I am transcendently self-conscious, which is to say I am aware of each mental state as belonging to me as the subject of thought. Similarly, awareness of bodily activity does not accompany every mental state. But whenever I am empirically self-conscious (in the thick sense of the term), I am aware of each mental state as belonging to me as the causally active subject of perception.

Second, Kant’s innovation in his account of full self-consciousness outstrips the parallels with transcendental self-consciousness. In transcendental self-consciousness, the subject and her activities remain just as internal to the mind as they are under traditional approaches to the self – whether this is the Humean dissolution of the self into a heap of mental contents and the correlations between them, or the rationalist reification of the ‘I’ of the ‘I think’ into an immaterial substance. Kant’s predecessors, along with proponents of Substrate-ER and Mediator-ER, may well allow that the body is experienced as an object in space, and even that the bodily senses receive causal affects. But because they do not allow the body to be anything more than a passive object of experience, they still endorse a separation of mind and body in approaching the subject, studying internal mental operations in abstraction from bodies. They lack the metaphysical framework for the full embodiment of outer cognition, which is only provided when Kant uncovers bodily activity as a further condition of our ordered mental life.

Kant does not simply put together a bundle of perceptions for the empirical self, replacing Hume’s subjective relations with objective relations. Nor does he make the rationalist mistake of characterizing the ‘I’ of the ‘I think’ as a substance, and identifying the subject with this alone. Both mental and material activity are expressed in experience, without the subject of this activity itself being a representation or relation. Thus, Kant does not endorse substance dualism, with a mental substance that thinks, and a material substance that acts. Rather, he leaves it open that the two activities, as conditions of experience, belong to one and the same substance – the human being – and that the subject of experience can be identified with this (A359-

60). The self revealed by empirical self-consciousness as determined in time is not a metaphysical subject, nor a unified bundle of mental states, but an epistemological subject that only gains empirical self-consciousness through bodily activity. Therefore, we can expect that his resolution to the issue of spontaneity will not involve a retreat to an all-mental account, but rather will continue in the same vein of uncovering both material activity and mental spontaneity as two necessary conditions of the experience of an embodied subject.

#### 4.7. Conclusion

I began by reviewing suggestions about the place of embodiment in the argument of the Refutation. I argued that proponents of ER have driven themselves into a Dilemma by ascribing subjectivity to the body as a metaphysical bearer of mental states, or as a mysterious felt body – both of which are divorced from material properties. On my reading, the bodily activity of the cognitive subject is a necessary condition of the determination of inner experience in time. In this active role in perception, the body also exhibits the fundamental aspect of material objects.

My investigation into empirical self-consciousness and embodiment shows that Kant wants to reject an all-mental subject with an unknown, internal source for representations. Kant is claiming that Cartesians were right to admit immediate experience of the subject – they were just wrong to claim that the subject is an isolated, all-mental individual. Empirical self-consciousness is more embodied than previous commentators have allowed, requiring active participation in the world. I have also suggested that an appeal to embodiment in the Kantian context requires a nuanced understanding of his theory of matter. The body cannot play its role when stripped of all material properties – a robust metaphysics of matter is required. Only then can we reconcile the crucial role of the body in empirical self-consciousness, with a meaningful notion of the body as an object in space. I turn to the task of spelling out the place of embodiment in Kant's theory of matter in the next chapter.

## Chapter 5

### Touch, bodily activity, and the perception of causal force

In previous chapters, I have relied on the claim that bodily activity is a kind of causal activity. I have suggested that awareness of bodily activity is equivalent to neither bodily sensation, nor awareness of the body as a spatiotemporally determined object. I also argued that bodily activity is a presupposition of the temporal determination of empirical self-consciousness. This raises the question: what is bodily activity? Kant's account of causation in the *Metaphysical Foundations of Natural Science* raises a further problem. According to Kant's account in *MAN*, we continually theorize about spaces beyond our own bodies, searching for larger or smaller relative spaces as we theorize about differently sized causal systems. Thus, considerations of causal activity in natural science seem to take us far away from considerations of the body.

In this chapter, I take a detailed look at *MAN* to address these problems. I begin with Kant's claim in *MAN* that perception of force through touch is fundamental to our knowledge of substance in space. I show that he also holds that perception cannot have modal content. Causation is a modal notion, so how can Kant allow perception of causal force? In response to this puzzle, I provide a new reading of Kant's theory of touch. Touch does not involve perception of the necessity of a cause, but it does involve awareness of the activity of our body in relation to other bodies. Human embodied activity has a hitherto unrecognized central role in Kant's accounts of empirical cognition of the causal community of substances in space, the science of such a substance, and the irreducibility of its causal forces. Bodily activity is identified with causal activity, and it is only through the body that we come to know about causation.

The work in this chapter has been written up as a publication in *Kant-Studien* (Robertson, forthcoming).

## 5.1. Introduction

[T]he first application of our concepts of *quantity* to matter [...] is grounded only on that property whereby it fills a space – which, by means of the sense of feeling, provides us with the quantity and figure of something extended, and thus with the concept of a determinate object in space, which forms the basis of everything else one can say about this thing. [...] But this substance discloses its existence to us in no other way than through that sense whereby we perceive its impenetrability, namely, feeling, and thus only in relation to contact, whose onset (in the approach of one matter to another) is called impact, and whose persistence is called pressure. It therefore seems as if every immediate action of one matter on the other could never be anything but pressure or impact, the only two influences we can sense immediately. (*MAN* 4: 510)

Kant claims that we perceive the force of matter through the sense of touch. Reaching towards a part of space occupied by matter, we sense resistance to our approach. This passage indicates three significant roles assigned to touch.

First, touch is how we know about the existence (*Dasein*) of substance. According to Kant's dynamic theory of matter, 'the concept of matter is reduced to nothing but moving forces' (*MAN* 4: 524). These forces come in two kinds. The attractive force (*die Anziehungskraft*) of an object causes other objects to move towards it, and the repulsive force (*die Zurückstoßungskraft*) of an object causes objects to move away from it (*MAN* 4: 498). Kant's claim is that we perceive repulsive force through touch. As matter is substance in space, touch is the basis of empirical cognition of such a substance.

Second, touch secures the epistemological status of a systematic study of substance in space – that is, a science of material nature. According to Kant, natural science requires a special metaphysics, which investigates what can be known *a priori* of 'a particular nature of this or that kind of thing, for which an empirical concept is given' (*MAN* 4: 470). The special metaphysics of material nature rests on an empirical concept of matter, and touch – as the only experience of the forces of matter – provides the empirical content for this concept.



Third, touch vindicates the fundamentality of force. Through touch, force is immediately perceived – before the application of quantitative concepts, and without mediation of effects like motion.<sup>48</sup> This suggests that forces are reducible to neither the properties of the body in which they inhere, nor the changes that they bring about in another body. Kant has elsewhere given systematic reasons for the irreducibility of forces. Regarding a reduction of force to the changing states of a body, he warns of a vicious regress: ‘actions are always the primary ground of all change of appearances, and therefore cannot lie in a subject that itself changes, since otherwise further actions and another subject, which determines this change, would be required’ (A205/B250). If a change in determinate states were a force, there would need to be a force explaining this change too, and so on. Even an appeal to the mere existence of a body does not help – as Watkins puts it, the question is: ‘How does the mere existence of one thing explain an effect in another?’ (2004, p. 243) Forces also cannot be equated with the changes they produce in another body. The difference is clearly demonstrated by bodies in equilibrium – they repel and attract each other with equal force, without producing changes of states. Even though Kant has these reasons for his claim that forces are irreducible, several questions remain: what *are* forces, how do they bring about changes, and how do we know about them? Kant’s claim that we immediately perceive force through touch suggests a way to dispel the mystery, implying not only a metaphysics robust enough for force to be a fundamental power, but also a way to know about it.

Thus, touch plays important roles in Kant’s accounts of empirical cognition of matter, the science of matter, and the irreducibility of causal forces. However, these roles are by no means straightforwardly assigned to touch, as has recently been shown

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<sup>48</sup> Kant’s claim is that touch is unmediated access to the object – unlike, for example, the mediation of sight by light. This is not the same as his claim that all empirical intuition is immediate because the object itself, not a mediating representation, is present to consciousness (see e.g. Allais, 2015, p. 147; Stang, 2016, p. 162). Note also that commentators tend to wrongly characterize Kant as allowing only mediate perception of force. Watkins suggests that we only perceive motion as the effect of force (2004, p. 271). Friedman suggests that we only perceive the filling of space as the effect of force (1992, pp. 161–199, 2013, p. 31).

by Colin Marshall (2017). Marshall begins with Kant's definition of 'the cause of a motion' as repulsive force (*MAN* 4: 497). Force is a causal notion (2017, p. 4).<sup>49</sup>

(1) Forces are causal.

Marshall then points to Kant's claim that a cause necessitates its effect, bringing it about in accordance with a universal causal law. For example, Kant describes how the repulsive force of bodies causes them to move apart 'in accordance with an invariable law' (*MAN* 4: 514).

(2) Causation is a modal concept.

Regarding modality, Kant writes, 'no necessity of connection [between perceptions] is or can become evident in the perceptions themselves' (B219); '[e]xperience teaches us [...] that something is constituted thus and so, but not that it could not be otherwise' (B3). In other words:

(3) We cannot immediately perceive modality.

Marshall characterizes Kant as endorsing a Humean argument for (3) (2017, p. 3). All we have in intuition is one singular representation after another, rather like the Humean sequence of impressions as individual, momentary states of affairs. We can perceive these discrete states in a sequence, such as the changing place of a moving ball. But we cannot perceive the modal status of these states, such as a ball moving according to invariable laws. In fact, I think that Kant goes beyond Humean skepticism. For Kant, causation gains objectivity as a pure concept of the understanding, a category of modality which is the condition of experience of causal sequences. Kant's acceptance of Hume's denial of experience of causation is a stepping stone to making a fundamentally anti-Humean point about the need for the resources of the faculty of the understanding, in particular the pure concepts of the understanding, to secure an *a priori* basis for the non-analytic necessity of causation. Thus, modal content is not provided by sense of touch, nor indeed any sense perception.

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<sup>49</sup> See also the account of force provided by Friedman (2004, p. xxviii).

Claims (1)-(3) imply:

(4) We cannot immediately perceive causes. (from 2, 3)

(5) We cannot immediately perceive force. (from 1, 4)

At best, we perceive the effects of force. And yet, Kant also claims:

(6) We immediately perceive force through touch.

The result is Marshall's Perceived Force Puzzle: Kant 'appears to both affirm and deny that we can perceive force' (2017, p. 2).

Kant's claim that we perceive causal force through touch raises important questions about the content of touch and the nature of causal forces. In what follows, I answer these questions in a way that resolves the apparent tension between Kant's claims, thereby defending the roles of touch in his theory of matter. In §5.2, I provide an original reading of Kant's theory of touch, arguing that it involves perception of the activity of an organ of touch in relation to an object in space. In §5.3, I apply this account of touch to Kant's theory of matter, showing that perception of embodied activity provides the empirical content for the notion of causal force, thus providing the empirical concept of matter as constituted by such force. The result is a qualification of (5) and (6), so that they no longer contradict each other:

(5') We cannot immediately perceive the necessity of the relations between parts of matter.

(6') Through touch, we immediately perceive a part of matter acting in relation to other parts.

I conclude that touch does indeed play significant roles in accounting for empirical cognition of the forces constituting substance in space, the empirical content for a special metaphysics of material nature, and the irreducibility of force.

## 5.2. Kant's theory of touch

According to Marshall's Puzzle, Kant ascribes content to the sense of touch that touch cannot have. In this section, I consider Kant's account of the content of touch. In §5.2.1, I discuss two aspects commonly attributed to touch by commentators on Kant: awareness of the figure of the object of touch, and awareness of the organ doing the touching. I outline a problem raised by these commentators: awareness of the organ inhibits perception of the object. In §5.2.2, I argue that Kant provides an answer. There is a third aspect of touch: awareness of the activity of the organ in relation to an object in space. The result is an original reading of Kant's theory of touch as describing an active/passive relation between the organ and the object of touch. This will lead to §5.3, in which I show how Kant's account of touch provides the resources for the roles of touch in his theory of matter.

### 5.2.1. Two aspects of touch

Commentators on Kant's theory of touch commonly acknowledge two aspects of touch. The first aspect is awareness of shape, as suggested by Kant's claim that touch provides 'the quantity and figure of something extended' (*MAN* 4: 510). Gary Hatfield even suggests that Kant simply adopts the dominant theory of touch at the time – held by others such as Berkeley and Reid – that touch educates vision about bodily shape (2014, p. 51).<sup>50</sup> The second aspect is awareness of the organ of touch. Kant mentions this aspect in the *Anthropology*, claiming that of the five senses, '[t]hree of them are more objective than subjective, that is, as empirical intuitions they contribute more to the cognition of the external object than they stir up the consciousness of the affected organ' (*Anth.* 7: 154).<sup>51</sup> There is a second aspect mentioned here for the objective senses, which include touch – consciousness of the sense organ.

Commentators who recognize the second aspect of touch have raised the following problem for Kant: awareness of the sensory quality of the organ is incompatible with the objectivity of the sense of touch. This is a concern raised by commentators as varied as Bennett (1966, p. 18), Moen (1997, p. 240), Schott (2010, pp. 103, 120), and

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<sup>50</sup> For historical overviews of debates about touch, see (Paterson, 2006, 2007).

<sup>51</sup> I use Loudon and Kuehn's translation of the *Anthropology* (Kant, 2006).

Vasseleu (1999, p. 155). The problem lies in Kant's definition of sensation as 'a perception that relates to the subject as a modification of its state' (A320/B376). Sensation relates to the subject's states, not the states of the object. So, according to these commentators, although Kant *claims* that touch involves awareness of both the object and the organ, he really only attributes the former to touch in its objective function. They claim that Kant's definition of sensation implies an oddly de-sensualized theory of perception of objects. The case of touch is held to be a prime example of his hostility towards the involvement of the body and sense organs in perception, according to which awareness of the organ merely inhibits perception of objects.

I will suggest that sensation is not the only kind of awareness we have of the organ of touch. The standard readings are nevertheless useful as they provide a negative characterization of a third aspect of touch: it is neither awareness of the object of touch, nor awareness of the sensory quality of the organ.

### 5.2.2. The third aspect of touch

There is a third aspect of touch, hitherto unrecognized by commentators: awareness of the organ's activity in relation to the object of touch. In what follows, I explain what this activity is, and how it is distinct from awareness of the organ that interferes with the objectivity of touch.

Kant hints at a third aspect of touch in the passage from the *Anthropology* considered above. He explains the distinction between subjective and objective senses in greater detail as follows:

These three outer senses lead the subject through reflection to cognition of the object as a thing outside ourselves. – But if the sensation becomes so strong that the consciousness of the movement of the organ becomes stronger than the consciousness of the relation to an external object, then external representations are changed into internal ones. – To notice smoothness or roughness in what can be touched is something entirely different from inquiring about the figure of the external body through touching. (*Anth.* 7: 156)

Subjective senses – smell and taste – only involve consciousness of the organs of smell and taste respectively. Touch can become a subjective sense if the sensation of the organ becomes too strong, in which case only internal representations are provided – the organ becomes the object of perception. But in its proper function as an objective sense, the figure of the object is the object of touch. When touching a shell, I immediately perceive its shape, not the shape of my finger – even if I am still aware of my finger.

Let us focus on Kant's claim that an increasing degree of awareness of the organ can shift touch from an objective to a subjective sense. Commentators who criticize Kant's theory of touch assume that he employs a distinction between two different objects of perception. We shift our attention from one object to another – from the object in the objective case, to the organ in the subjective case. However, this reading of Kant makes no sense of his claim that awareness increases in degrees. The distinction between different objects of perception is not a matter of degree. It does not matter how much we are aware of the organ – as soon as we are aware of the organ, touch is a subjective sense.

I suggest that a better reading is that Kant employs a distinction between two kinds of awareness, rather than competing degrees of awareness of the same kind. There is awareness of something acting as the means of touching, and a distinct kind of awareness of something as the object being touched. A sense organ can provide both kinds of awareness, and each kind comes in degrees of awareness. This means that sometimes one kind of awareness is in the foreground more than the other. For example, if the object of touch is too sharp or too hot, the organ of touch delivers only a weak awareness of the activity of touching, and a much stronger awareness of the passively determined states of the organ as painful. Another helpful example is Merleau-Ponty's description of clasping the left hand with the right hand (Merleau-Ponty, 1964, 1968, p. 9). The right hand is the organ of touch, with which you discover the figure of the left hand as the object of touch. Attention can be so easily swapped between the figures of the left and right hands that it is not always clear which is doing the touching, and which is being touched.

Awareness of the means of touch contributes to a third aspect of touch. This allows Kant to avoid the de-sensualization of touch, because he shows that sensation is not

the only way we are aware of sense organs in perception. Sensation is awareness of the changing states of the organ, as a result of causal affection by the object – it is passive awareness of the organ as an object.<sup>52</sup> By contrast, the third aspect of touch is awareness of the activity of the organ. Kant gestures towards this activity inherent in touch, describing how we can inquire after the shape of a body by ‘touching it on all sides’ (*Anth*, 7: 154). We should not be misled into equating awareness of the activity of the sense organ with awareness of its motion. The difference is clearly demonstrated by the case of holding an object in one hand. We are not aware of the motion of the organ, but we are still aware of its activity on the object.

The active/passive distinction can be elaborated on in two further ways. First, sensation is within the body frame, whereas the activity of the organ is in a space external to the body frame. Kant writes:

In the dark I orient myself in a room that is familiar to me if I can take hold of even one single object whose position I remember. But it is plain that nothing helps me here except the faculty for determining position according to a *subjective* ground of differentiation: for I do not see at all the objects whose place I am to find [...]. But I can soon orient myself through the mere feeling of a difference between my two sides, the right and left. (*WDO* 8: 135)<sup>53</sup>

Touching an object allows us to work out where we are in a dark room. Kant claims that this determination of position has a subjective ground. This is the lesson of his argument from incongruent counterparts, pairs of objects such as oppositely spiraling shells, which have exactly similar intrinsic properties but are oriented in different

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<sup>52</sup> More specifically, sensation is a certain degree of sensory quality as the effect of the object on the organ of touch. Kant writes: ‘In all appearances the sensation, and the real, which corresponds to it in the object (*realitas phaenomenon*), has an intensive magnitude, i.e., a degree’ (A166). Reality (*Realität*) is a category of quality, applied when an object instantiates a certain quality. According to Kant’s dynamic theory of matter, the reality of matter is force (*MAN* 4: 523). Forces vary in degrees of strength, so the degree to which they fill space varies. Sensation corresponds to this reality, and Kant intimates that this correspondence is causal – although he stops short of providing a full account in *KrV* (A168f./B210).

<sup>53</sup> I use Wood’s translation in (Kant, 1996).

directions.<sup>54</sup> The inner dimensions and arrangements of two incongruent shells do not reveal which spirals clockwise or anti-clockwise – in either case, there would be the same distances between each segment of shell, the same increasing proportions of size, and so on. There is no perceptible or conceptual difference in these inner dimensions. In general, the difference between the location of different parts of matter cannot be given solely in terms of their inner relations, but requires relation to an external space. There is a structure to space that is external to the positions of parts of the body relative to one another. This external structure belongs ‘merely to the subjective form of our sensible intuition’ (*MAN* 4: 484.). It is *a priori* insofar as we do not find it in experience, whether from perceiving the objects themselves, or from experiencing our own bodily figure. Otherwise, the problem would just reoccur – we need an external space against which to determine the orientation of these internal dimensions. Thus, we generate an external space by sensing directions relative to the body: towards or away, to the left or the right, in front or behind, above or below the body. Without this body-axis, we would not be able to determine different directions in space, and so we would not be able to distinguish between different regions of space. This would prevent us from having a grasp of space at all. In other words, space is not a visual image or some inner mental correlative.<sup>55</sup> No matter how accurate a map is, we cannot use it to get somewhere unless we know where we are on it and which direction we are facing. Space gains its externality only relative to an embodied point of view, which is not itself produced by experience but is instead a condition of any spatial

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<sup>54</sup> Kant’s theory of space changed dramatically throughout his works on incongruent counterparts. He initially argued in favour of Newtonian absolute space, a backdrop existing independently of all matter. Nevertheless, the lesson across his works remains the same: the human body is the basis for orientation because absolute space cannot be perceived. For comparable readings of incongruent counterparts in Kant, see: Allais (2009, p. 387); Hanna (2008); Nuzzo (2008, p. 22); Rukgaber (2009); Walford (2006); Watkins (1998, p. 580); Woelert (2007).

<sup>55</sup> This view is evidenced in contemporary accounts of the role of the body in touch. For example, De Vignemont and Massin claim that we need a ‘geometric mental map of the body’ (2013, p. 304).



experience. The implication for our purposes is that awareness of the activity of the sense organ involves awareness of its location in an external space.<sup>56</sup>

This distinguishes awareness of the activity of the organ from sensation. Say that I cross my hands and touch an object in the dark room with my left hand. Sensation has an internal location in my left hand, but I am still aware that the touching is occurring in a space external to the bodily frame – on the right side of the room.<sup>57</sup> We are aware of the activity of the organ of touch as located in an external space relative to the body-axis. Sensation has no such external position.

A second difference is that sensation is the effect of touch, whereas the activity of the organ is the means of touch. This is shown by comparing awareness of the organ in an objective case of touch to awareness of the body through proprioception.<sup>58</sup> In proprioception, we are not aware of anything beyond the position of our own body. In an external case of touch, we are aware of the orientation of the object of touch.<sup>59</sup> When an organ touches an object, it determines the orientation of its boundaries in an external space. The orientated boundaries of a physical body are its objectifying, individuating feature: ‘a body [...] is a matter between determinate boundaries (which therefore has a figure)’ (*MAN* 4: 525). You are not aware of a shell which spirals clockwise, if you cannot tell it is not a shell which spirals anti-clockwise. Thus, awareness of the figure of the object depends on our awareness of the organ’s activity

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<sup>56</sup> Kant has a unique account of our awareness of the organ of touch, which is not awareness of an object, and our access to external space through sensibility, which is not through mental concepts or images. For an overview of Kant scholars who deny that sensation has spatial content, see Rukgaber (2009, p. 173). On non-Kantian proponents of the view that touch has no spatial content, see Paterson (Paterson, 2006, pp. 233–234). Arguments for external space as an aspect of touch have been given recently in non-Kantian contexts (De Vignemont & Massin, 2013, p. 304; O’Shaughnessy, 1980, p. 184).

<sup>57</sup> On crossing hands, see De Vignemont & Massin (2013, p. 308) and Yamamoto & Kitazawa (2001a, 2001b).

<sup>58</sup> Sometimes, ‘proprioception’ is used only of awareness of bodily position, but I use it as including kinesthesia, awareness of bodily motion (Ratcliffe, 2008, p. 301, fn. 3).

<sup>59</sup> This is not the same as Kant’s active/passive distinction regarding sensibility and the understanding (see §5.4).

in space. This contrasts with awareness of the organ through sensation, which depends on an empirical manifold given through the causal affection of the object on the organ.

Therefore, Kant rejects the view that the organ and the object are perceived in the same way, just to different degrees. Kant's concern is to secure immediate awareness of the figure of the object, instead of mediate awareness of it through the states of the organ. Interestingly, this distinguishes his theory from most recent accounts of touch, which claim that the shape of the organ of touch mediates our perception of the shape of the object: we feel a concavity in our flesh, and through this we are aware of a corresponding convexity in an object (Armstrong, 1962, p. 18); or the circular motion of a hand corresponds to a circular object (Martin, 1992; O'Shaughnessy, 2000, p. 629). By contrast, Kantian touch is unmediated by awareness of the organ as a shaped object. Instead, it is immediate awareness of the object being touched through the activity of the organ in relation to that object.

Kant's account could nevertheless benefit from recent insights into the many different kinds of touch, as outlined comprehensively by Ratcliffe (2008, p. 310). Kant only considers cases in which the organ is a body part and the object is a non-body part. He does not consider how non-body objects can be integrated into the organ side when they are used to touch, such as gloves, walking sticks, sports racquets, and paintbrushes. Furthermore, the object of touch could be part of one's own body, as in the case of clasping hands. In addition, the object of touch need not be figure, such as feeling the wind blowing. Arguably, Kant's acceptance that a specific object, the sense organ, can be a means of touch provides a framework that can be extended to cover these additional cases where other objects take on the role of the sense organ.

To sum up, I began by considering two aspects of touch: awareness of the figure of the object, and awareness of the states of the organ through sensation. As a response to the objection that these aspects are in tension, I offered a negative characterization of a third aspect of touch as neither of these aspects. In §5.2.2, I discussed the organ-object sides of touch, distinguished not by degrees of awareness of the same kind, but by differing kinds of awareness. There is a third aspect of touch: awareness of the activity of the organ in relation to an object in an external space. Kant's theory of touch involves an active/passive relation between the organ and the object of touch.

In the next section I show that this account of touch allows it to play significant roles in Kant's theory of matter.

### 5.3. Touch and causal force

Marshall's Puzzle is that Kant denies that perception can have modal, hence causal, content. So, Kant seems to deny immediate perception of causal force through touch. On my reading of Kant's theory of touch, we can perceive the activity of an organ in relation to an object in space. I now argue that this perception of activity provides empirical content for the notion of force, hence the notion of matter. To prepare for this argument, in §5.3.1, I argue that Kant's account of the modality of force is different to what Marshall suggests, allowing for both necessary and contingent aspects. In §5.3.2, I show that the contingent aspect of force can only be empirically known, as the activity of a part of matter in relation to another part. I conclude that this is known by the sense of touch.

#### 5.3.1. The modality of force

To properly account for the role of touch, we need to take another look at the modality of matter on Kant's account. Kant's discussion of modality is shaped by his essentialism about matter.<sup>60</sup> He writes:

A property on which the inner possibility of a thing rests, as a condition, is an essential element thereof. Hence repulsive force belongs to the essence of matter just as much as attractive force, and neither can be separated from the other in the concept of matter. (*MAN* 4: 511)

The real essence of matter is the ground that explains all its other properties. This contrasts with the logical essence of matter, which is whatever is contained in the

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<sup>60</sup> Several different readings lead to a similar account of matter. See Stang (2016) on Kant's essentialism about matter, Watkins (2004) on Kant's causal power model of causation, and Langton (2001, pp. 175–178, 2018; Langton & Robichaud, 2010) on Kant's account of phenomenal substance.

concept of matter, as the ground of everything else contained in that concept (see Stang, 2016, p. 234). Repulsive and attractive forces are needed to make matter what it is – without them, matter could not fill space. Thus, forces are part of the real essence of matter.

Kant attributes a necessary aspect to force: matter has a real essence, constituted by forces, which grounds the necessity of the properties of matter. Given the real essence of matter, any part of matter behaves in certain ways when brought into relation to other parts, attracting and repelling them (*MAN* 4: 497f.). The real essence of matter grounds the laws governing the causal interaction between parts of matter. Thus, Kant holds a causal power model of causation, according to which a cause is the power of a part of matter to act in accordance with its real essence to determine effects.

The necessary aspect is not all there is to the modality of force. Kant links the concepts of substance and matter, revealing a contingent aspect of force. As this link has been explored in depth by previous commentators, I mention only the points relevant to Kant's ascription of contingency to force (see Guyer, 1987, pp. 232–233; Langton, 2001).

Kant claims that matter plays the role of phenomenal substance through its real essence, filling and persisting in space through forces. In discussing phenomenal substance, Kant has already moved beyond the pure concept of substance as 'a something that can be thought as a subject (without being a predicate of something else)' (A147/B186). The pure concept of substance is limited: 'Now out of this representation I can make nothing, as it shows me nothing at all about what determinations the thing that is to count as such a first subject is to have' (A147/B186f). The pure concept does not apply in experience, let alone determine the properties that substance has in space. Thus, Kant offers a schematized concept of substance, which tells us to look for a substratum for the time-determination of objects (A144/B183). This adds some spatio-temporal content – substance is that which endures through changes in other objects. But the schematized concept still only tells us about the effects brought about by substance, namely its endurance in space. It does not involve the real ground of matter, so it does not show *how* substance endures in space. The beginnings of an answer are only provided when Kant equates matter with phenomenal substance:

Matter is *substantia phaenomenon*. What pertains to it internally I seek in all parts of space that it occupies and in all effects that it carries out, and which can certainly always be only appearances of outer sense. I therefore have nothing absolutely but only comparatively internal, which itself in turn consists of outer relations. (A277/B333)

As Langton explains, absolutely intrinsic properties of a thing involve ‘no relation whatsoever [...] to anything different from itself’ (2001, p. 34). Such properties include the solidity and geometrical extension of a substance, which are specified only in terms of that substance. These properties do not determine how, if at all, the substance relates to other things. In particular, they underdetermine whether substance fills space by interacting with other substances. By contrast, force is a relational property of a part of matter, defined entirely by its action (attraction or repulsion) on other parts of matter. The real essence of matter, as constituted by forces, is comparatively intrinsic, ‘in the sense that it explains the manifest character of matter and in the sense that it is essential to matter’ (Stang, 2018, p. 484).

The forces of matter are the comparatively internal – that is, relational – properties of substance. This link between matter and substance allows Kant to ascribe a contingent aspect to force. To use possible-world terminology, there are possible worlds where substance has the same absolutely intrinsic property of occupying space – solidity or geometrical extension – but different relational properties, which ground different laws of nature. In these worlds, substance is not constituted by forces. To use Langton’s example, in some such worlds, one could walk through walls which occupy space, but do not fill space by the forces of matter.

Therefore, Kant has a more complex modality of matter than suggested by Marshall’s Puzzle. Marshall offers the following modal picture: there are singular events or states of affairs in sequence, with causal, hence necessary, relations holding between them. The Puzzle arises from our inability to perceive these necessary relations. But Kant has a different modal account: there are parts of matter, with a real essence grounding the relations between them. Forces are the real essence of matter, grounding the necessity of its properties. It is contingent that forces play the role of substance – something with a different real essence could have played the role, so parts of matter could have interacted in very different ways, or not at all.

### 5.3.2. The empirically known aspect of force

According to Kant's account of matter as phenomenal substance, we can cognize the relational real essence of matter.<sup>61</sup> In what follows, I argue that this real essence can only be empirically known, which opens up roles for touch to play.

On Kant's distinction between two kinds of *a priori*, there could be analytic or synthetic *a priori* cognition. He rejects both options when it comes to substance.

First, Kant rejects analytic *a priori* cognition of substance. In *MAN*, Kant writes about 'Lambert and others' who attempt to account for the filling of space in terms of 'solidity' (*Solidität*), a primitive property not further explained in terms of causal forces.<sup>62</sup> He explains that they 'call the property of matter by which it fills a space *solidity* (a rather ambiguous expression), and claim that one must assume this in every thing *that exists* (substance), at least in the outer sensible world' (*MAN* 4: 497). They begin with the claim that any existing substance can resist the intrusion of its space by another part of substance 'through its concept, and thus in accordance with the principle of non-contradiction' (*MAN* 4: 498). The concept of substance contains the concept of solidity, which itself contains the concept of being unable to coexist with anything else in exactly the same region of space. Based on this concept, Lambert and others claim it is a logical contradiction for one substance to occupy the space of another. They attempt to give logical necessity to the endurance of substance in space. In response, Kant writes: 'the principle of noncontradiction does not repel a matter' (*MAN* 4: 498). On Kant's account, 'matter fills a space, not by its mere existence, but by a special moving force' (*MAN* 4: 497). The laws of matter are grounded on a real essence, not a logical essence. So, there is no analytic *a priori* approach to substance.

Second, Kant rejects synthetic *a priori* cognition of substance. This includes the Cartesian explanation of all other properties of matter in terms of the geometrical property of extension; or the claim of mathematical physicists like Newton, that we

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<sup>61</sup> This is even though the absolutely intrinsic real essence of things is inscrutable to us – on Kant's denial that we know real essences, see Stang (2016, p. 7).

<sup>62</sup> For more on Kant's discussion of Lambert, see Friedman (2013, pp. 121–130); Langton (2018); Giovanelli (2010, p. 37); and Jankowiak (2013).

can avoid giving empirical content to forces through using mathematical formulae like  $F=ma$ .<sup>63</sup> These are attempts to ground the endurance of substance in space on the *a priori* forms of intuition. However, these accounts conflate the roles of sensibility in geometry with the roles of sensibility in physics. Both the geometer and the physicist face the empirical question of existence: are their concepts instantiated by existing objects? They both need sensible experience to answer this question. Both also must have the forms of sensibility (space and time). Kant famously claims that all of mathematics has the status of synthetic *a priori*, to secure the universality of mathematical truths. But only the physicist has an extra third role for sensibility: providing the empirical content of the concept of matter. The question of empirical content is not the question of existence. For example, the concept of a unicorn has content, as it means something to us. It is a further question whether a unicorn exists. Without any particular experience, a geometer could think of a triangle occupying space, analyzing its geometrical (formal) properties. By contrast, a physicist who lacked experience could not even think of a part of matter filling space. Without experience, the geometer's thoughts lack only an answer to the question of existence, but the physicist's thoughts lack an answer to both the questions of existence and content. The missing content is not conceptual, from the understanding. Neither is it synthetic *a priori*, from pure sensibility. The physicist's missing content is empirical, requiring empirical sensibility. Thus, Kant rejects the synthetic *a priori* approach to substance.

Kant rejects both kinds of *a priori* approaches to substance, so he requires an *a posteriori* approach. The resources of the mind as described by the transcendental metaphysics<sup>64</sup> of *KrV* – the categories, schemata, and forms of intuition – do not provide the empirical content for the notion of force. Transcendental metaphysics shows that there are unchanging causal laws governing all empirical objects, but it

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<sup>63</sup> For more on Descartes and Newton on matter, see Friedman (2004) and Watkins (2004, p. 272).

<sup>64</sup> On this distinction between transcendental and special metaphysics, see Friedman (1992, pp. 73–74).

does not show which grounds are in fact in nature (A207/B252).<sup>65</sup> This leaves it open that substance could have its formal properties and logical essence – solidity and geometrical extension – but completely different effects, or indeed no effects at all. To discover grounds in nature, we need a special metaphysics of nature, which in turn requires empirical content for the empirical concept of matter (*MAN* 4: 470). Sense experience is therefore the ‘instructress’ (*Lehrerin*) for knowledge of the relational properties of matter, the filling of space by forces (A222/B269).

What is the content that needs to be provided by experience? We can get clearer on this by considering the otherwise mysterious status of forces as relational properties. I suggested in §5.1 that there is a mystery about what forces are, given that they are neither the body in which they inhere, nor the changes that they bring about in another body. The *a priori* approaches to substance in space do not solve this mystery, since they do not explain how, if at all, parts of matter relate to each other by forces. This is especially pressing given a background of skepticism about the causal interaction of substance, which comes from both sides of empiricism and rationalism.<sup>66</sup> On the empiricist side, Hume finds neither substance nor causation in experience, attributing both concepts to subjective expectations of the mind. As Watkins writes, empiricists ‘would naturally object that the activity of a causal power, along with any model of causality of which it is a part, is unintelligible or at least obscure’ (2004, p. 266). On the rationalist side, Leibniz claims that substances do not interact. Leibniz has a pre-established harmony model of causation, according to which a cause is a substance acting upon itself in accordance with a law, in harmony with the activities of all other substances. Kant needs to rule out that forces are merely internal changes in individual substances. Thus, the required empirical content must

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<sup>65</sup> This includes Kant’s own causal model in the Second Analogy, which ‘merely states that a cause is required to bring about a succession of states in substance as its effect’ but ‘does not explicitly require that a cause [...] have any specific characteristics at all’ (Watkins, 2004, p. 237).

<sup>66</sup> For comparisons of Hume and Kant, see discussions in Beck (1978) and Watkins (2004, Chapter 6). On Kant’s objection to Leibniz, see Langton (2001) and Watkins (2004, Chapter 1).



be provided by experience<sup>67</sup> of the activity of a part of matter in relation to another part.

Taking stock, in §5.3.1, I argued that Kant's account of matter as playing the role of substance allows a contingent aspect of force. In §5.3.2, I showed that Kant rejects *a priori* approaches to substance, so this contingent aspect can only be empirically known. The specific experience required is of the activity of a part of matter in relation to another part. We are now in a position to bring together Kant's theory of touch with his theory of matter.

In §5.2.1, I showed that Kant provides a negative characterization of our awareness of the organ in an external case of touch: it is neither awareness of the figure of the object, nor awareness of the changing states of the organ as the effect of the object (sensation). This parallels the status of forces as neither the body in which they inhere, nor the changing states they produce. A positive characterization in the case of touch comes through experience of the activity of the organ in relation to an object in space. This is exactly the kind of activity required for a positive characterization of force. Touch is a specific case of parts of matter acting in relation to each other.

Contra Marshall's Puzzle, Kant does not claim that touch is perception of the necessity of the relations between parts of matter. Rather, touch is immediate perception of a part of matter acting in relation to another part. This is the empirical content required for the notion of force. Therefore, the sense of touch allows empirical cognition of the forces that constitute matter, even though it does not provide knowledge of their modal status.

We can now elaborate on the three roles of touch in Kant's theory of matter. First, touch provides the missing empirical content needed for the notion of forces, hence the empirical concept of matter as constituted by forces. As matter is substance in space, the empirical content provided by touch is the basis of empirical cognition of

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<sup>67</sup> The task for touch is the provision of empirical content. Thus, my characterization of touch as an 'experience' means that it is a perceptual impression of sensibility through which empirical content is provided. I do not mean Kant's stronger use of the term *Erfahrung* as an empirical judgment such as 'that is activity', which would require synthesis and the workings of the understanding.

substance. This is how the existence of substance is disclosed to us, as claimed in the opening passage of this chapter (*MAN* 4: 510). Kant allows that we can perceive the comparatively intrinsic nature of substance in space.

Second, the empirical concept of matter required for special metaphysics of material nature is provided by touch. This is significant because even commentators who accept that we can perceive force through touch ascribe it only a limited role in natural science. Kant's theory of natural science is often described in terms of overcoming the limited human standpoint in favour of theoretical spaces and objects that are further away, greatly increased or reduced in size, or increasingly more abstract. For example, Langton ascribes a kind of scientific realism to Kant, based on a distinction between 'manifest' and 'scientific' images. The manifest image is the world of objects like houses and ships which can be accessed through the senses. The scientific image is the world of theoretical entities like forces. Langton claims: 'Kant cares less for the manifest image than for the scientific image [...]. Phenomenal objects do have the often unobservable properties that physics ascribes to them; and they do not have colours and tastes' (2001, p. 142); 'Whether or not we can actually see or hear or touch something is quite irrelevant to whether it is empirically real' (2001, p. 144).<sup>68</sup> Friedman offers similar considerations of touch, tracing a movement 'from an application of mathematics to the bodies of our terrestrial experience mediated primarily by the force of impenetrability (and therefore by the sense of touch) to a much more extensive application of mathematics to the bodies of both celestial and terrestrial experience', which is done 'independently of the sense of touch' (2001, p. 65).

Instead, on my reading of Kant, even the scientific image requires the subject to appear in the causal system of nature as an embodied observer, interacting with objects and registering causal effects. Rather than claiming that the mind overcomes the limits of the situated body in scientific pursuit, Kant claims that the body allows us to overcome the limitations of the mind – we need more than what can be known *a priori*

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<sup>68</sup> Compare also Warren's similar claim that impenetrability is primarily associated with the general effect it has 'on the state of motion of outer bodies' (Warren, 2001a, p. 50, 2001b). See also Emundts's assertion that 'impenetrability can be explained independently of the human sense of touch' (2008, p. 131).

about substance and its properties, particularly its relational properties. The place of the empirical concept of matter at the foundation of natural science shows that even as scientific theories get more abstract, we still rely on embodied experience to know *what* these theories hold of – matter and its forces. We need to be literally in touch with material nature.

Third, Kant's theory of the causal properties of matter as grounded in force shows it to be a fundamental power irreducible to bodies or the states it produces. Force is known through our own experience of being a locus of force. It is worth comparing this to Watkins' (2004) suggestion that causality is given empirical content by our awareness of the activity of the understanding. Watkins considers the objection that Kant 'cannot obviously or immediately claim that this same notion of activity is also at work in physical cases, especially if Kant admits to important differences between the two cases' (Watkins, 2004, p. 279, fn. 57). Watkins responds that the activity we are aware of in self-consciousness is a 'specific instance of a generic notion of activity' from which Kant could 'abstract' away to apply it to his general model of causality (ibid.). However, I argue that the difference between non-physical and physical activity is more significant than Watkins allows. The issue is the lack of empirical content for the notion of the activity of a part of matter on another part in space. The activity of the understanding is not even a case of two substances acting on another. Moreover, it has the wrong associations – it is a classic case of spontaneity, whereas physical activity occurs in the natural world of causes. In short, only experience of physical activity can provide the content for our concept of the physical activity of force. On my account, this is what touch provides. Bodily activity lies at the foundation of natural science, not the mental activity of the understanding.<sup>69</sup>

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<sup>69</sup> This raises the question of the relation between two points of view on the self – as the materially active self and as the mentally active self. I return to this issue in the conclusion to this thesis.

## 5.4. Conclusion

The Perceived Force Puzzle was that touch cannot be perception of force, because it cannot have causal or modal content. At best, we only perceive the effects of force on parts of matter. In response, I took a closer look at Kant's theory of touch. I argued that instead of providing a de-sensualized account of sense perception, Kant preserves the role of the sense organ by identifying a distinct way to be aware of an object – awareness of using an object to act upon another. Touch is an active/passive relation between the organ and the object of touch. I then argued that the notion of matter requires empirical content, specifically of the activity of a part of matter in relation to another part. Experience of the active/passive relation in touch provides the content for this notion. Thus, rather than claiming that we can and cannot immediately perceive force through touch, Kant's two claims can be characterized as follows:

(5') We cannot immediately perceive the necessity of the relations between parts of matter.

(6') Through touch, we immediately perceive a part of matter acting in relation to other parts.

A remaining question is how Kant's dependence on embodied human experience fits with scientific realism about causation, matter and force.<sup>70</sup> This can be answered in terms of a different question. Kant claims that sensibility is defined in terms of receptivity, the capacity 'to acquire representations through the way in which we are affected by objects' (A19/B33). How does the activity of the organ of touch fit with Kant's characterization of sensibility as passive?

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<sup>70</sup> This worry is raised by contemporary theorists who ascribe a role to the body in knowledge of causation. For example, Madden and Harré suggest that causal knowledge comes from visual experience rather than from touch, because they follow both James and Whitehead in holding that deriving causal power from experience of bodily exertion through touch leads to panpsychism (Harré & Madden, 1975; James, 1971, p. 19; Whitehead, 1959). Note that James sees this link as a reason to reject this theory of causality, whereas Whitehead takes it as a positive point for his theory of causality (for further discussion of these opposing views, see Fales, 2002, Chapter 2).

Kant contrasts the passivity of sensibility with the spontaneity of the faculty of understanding, which is ‘the faculty for bringing forth representations itself’ (A51/B75). My reading of Kant’s account of touch can still respect this contrast. The active nature of the understanding has to do with our freedom with respect to what we cognize. We can think about a five-legged elephant, even if the one in front of us has four legs. The passivity of sensibility consists in the fact that we do not choose the features we receive when we relate to objects, just as a camera lens picks up everything over which it pans. I take it that this is meant to give a realist underpinning to Kant’s theory of cognition – our sensibility receives features that are in the world and not produced by us. We have no choice but to perceive a four-legged elephant when we are looking at it; sensibility cannot produce a fifth foot. My attribution of activity to the sense of touch does not have to undermine Kant’s scientific realism. The activity of the sense organ does not have to do with an inner capacity for production (as with the understanding) but an outer capacity for selection. Just as the camera can move around, and can be directed at different things, our sensible apparatus can move around. This does not conflict with the passivity of sensibility, as what the apparatus then picks up is passively received and not actively produced. For example, we can choose to stand so that a pillar blocks our view of one of the elephant’s legs, so we only perceive three legs, but this does not make it the case that the elephant is in fact three-legged. In the case of matter, the discovery of the interaction of matter by forces is dependent on the active bodies we have, but the real essence that matter in fact has is not dependent on this discovery.

All this is to say that cognition is embodied – not merely in virtue of our having bodily senses, but also through our bodily involvement in the natural world. Empirical cognition of substance in space involves not only the causal affection of the senses, but also embodied activity. Kant recognizes that we do not merely observe, but also act in the world. Considerations of embodied activity shape his theory of matter, revealing a natural world charged with causal powers.

## Chapter 6

### Conclusion

In the introduction to this thesis, I discussed the features of Kant's transcendental account of cognition. I suggested that a transcendental condition of cognition has the following basic features: (a) it is a contribution of the cognitive subject which constitutes some feature of cognition, (b) it is known *a priori* (i.e. independently of experience), and (c) it necessarily and universally holds for all objects of cognition. I then raised the problem that the body, as an empirical object, cannot have these features, and so cannot be a transcendental condition of cognition.

Looking back over the previous chapters, we have seen how Kant uses his transcendental method to uncover an active aspect of embodiment, the capacity for bodily activity. In *Chapter 3*, I started with Kant's claim that cognition requires the combination of the provision of sensibility and the understanding in order to provide the representation of objects in space and time. Following his argument about the conditions of this combination through the Transcendental Analytic, I suggested that the cognitive subject constitutes the spatio-temporal structure of experience by means of her capacity for bodily activity. In *Chapter 4*, I considered Kant's account of the time-determination of empirical self-consciousness. I argued that the capacity for bodily activity is a necessary condition for the time-determination of empirical self-consciousness, and also provides the content for the subject's awareness of herself as active in the world. In *Chapter 5*, I investigated the conditions of cognition of the nature of substance in space. I showed that on Kant's account, the cognitive subject relies on her own bodily activity to provide the empirical content for the concept of the forces which constitute substance in space. Bodily activity provides the content for the empirical concept of matter which is required for natural science. Embodied sensibility makes a distinct contribution to cognition, not only through the passive bodily reception of the manifold of intuition, but also in organizing that manifold through bodily activity.

Kant's discussion of the embodiment of the cognitive subject brings us closer to understanding how embodiment can be discussed as part of a transcendental account. Any claims about the body refer to an empirical object, so I do not think that Kant's claims about bodily activity fulfil his criterion of apriority, which states that a priori cognitions 'occur absolutely independently of all experience' (B3). Nevertheless, Kant isolates an aspect of the body that is not equivalent to sensation, nor the spatio-temporally determinate properties of the body. This aspect is bodily activity, which is not reducible to mental activity. For Kant, the embodiment of the cognitive subject does not mean sensation, proprioception, or any other form of sense perception of one's own body. Embodiment does not consist in identifying the subject with her body in the ordinary sense of an extended object bounded by skin. Instead, embodiment is the capacity for activity in the material world. In focusing on this isolated active aspect of the body, I think that some of the features that he mentions in his account of transcendental conditions can still be assigned to the body.

First, I suggest that Kant preserves a distinction between transcendental and empirical accounts of embodiment. Kant keeps his transcendental account of embodiment very abstract, focusing on general procedures for action rather than specific enactments. In each discussion of cognition, we learn about the roles that are played by the embodiment of the cognitive subject through Kant's transcendental arguments, not through empirical observation of the body. Indeed, except in cases of empirical self-consciousness, cognition usually proceeds without our paying any attention to the body playing its active role. Therefore, Kant's conclusions have not been claims about particular bodily features or specific causal mechanisms. In writing about the distinctive contribution of sensibility, Kant indicates that embodied procedures are needed in order for certain features of cognition to be possible, whilst leaving it open as to what causal mechanisms actually perform the relevant functions.<sup>71</sup> Filling in the details of actual causal mechanisms is the task of empirical

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<sup>71</sup> Kitcher (1990, p. 14) makes a similar appeal to abstractness in defending her account of transcendental psychology. According to Kitcher, Kant's transcendental account of cognition 'makes empirical assumptions about cognitive capacities', and has 'the same basic subject matter' as empirical psychology (1990, p. 25). The difference is that my account concerns the involvement of a specific empirical object, the human body. Kitcher claims that Kant's theory

investigation. Kant's transcendental account of cognition is related to empirical investigations – it helps us to identify what kinds of processes and explanations we should investigate. Nevertheless, in its abstractness, the transcendental account of embodiment remains distinct from any empirical investigation. This brings us back to Kant's *quid juris* vs. *quid facti* distinction (A84-6/B116-8). If we were to describe the causal mechanisms of the body, we would only answer a question 'which concerns the fact'. Kant's innovation is to articulate embodiment at an abstract level, as part of his justification of the possibility of cognition. This suggests that embodiment plays important roles according to his transcendental account, which concerns the contribution of the cognitive subject which constitutes some features of cognition.

Second, I think that embodiment is a necessary and universal condition of cognition, although only to the extent that Kant restricts his transcendental account to beings with our cognitive capacities. Commentators such as Kitcher and Nuzzo have noted that Kant's transcendental arguments begin with features of *human* cognition, with his conclusions pertaining only to the human cognitive capacities that contribute to those features (Kitcher, 1990, pp. 9, 23; Nuzzo, 2008, Chapter 1). Kant signals the importance of the restriction of his investigation to human beings when he suggests that the availability of both stems of cognition is a distinguishing feature of human cognition.

[O]ur kind of outer as well as inner intuition [...] is called sensible because it is not original, i.e., one through which the existence of the object of intuition is itself given (and that, so far as we can have insight, can only pertain to the original being); rather it is dependent on the existence of the object, thus it is possible only insofar as the representational capacity of the subject is affected through that. (B72)

Kant contrasts human sensibility with the case of what he calls 'original' intuition – the non-sensible, intuitive intellect of God. A being with original intuition only has to represent something for it to be actual, as it produces the manifold of experience

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is so abstract that it does not even refer to the body. She only takes Kant to be discussing mental processes. I suggest instead that Kant's reference to the embodied capacity of sensibility does not commit him to any claims about the actual causes of processes.



directly from its own faculty of cognition (B135). As Förster puts it, such a being would be an intellect ‘for which possibility (thinking) and actuality (being) coincide’ (2012, pp. 145–152; see also Watkins & Willaschek, 2017, p. 88).<sup>72</sup> One distinctive feature of human sensible intuition is that it is dependent on external stimuli, with the faculty of thought (the understanding) dependent on the content provided by sensibility – it is ‘discursive’. Sensibility is required to transform merely thinking about something, into experiencing it in space and time. Kant's investigation is limited to a kind of cognition which is only available to human minds.

Due to this restriction to the human case, the conclusions of Kant's transcendental arguments have a qualified necessity and universality. Transcendental conditions are necessary for all beings with our cognitive capacities. Kitcher points to Kant's relativization of necessity in the following passage from the Methodology section of KrV:

[Pure reason] certainly erects secure principles, but not directly from concepts, but rather always only indirectly through the relation of these concepts to something entirely contingent, namely possible experience; since if this (something as object of possible experience) is presupposed, then they are of course apodictically certain. (A747/B765)

Kitcher comments: ‘Granted that we have experience, that is, granted broadly shared assumptions about our cognitive capacities, Kant maintains that his conclusions about the necessary and universal features of cognition are certain.’ (1990, p. 24) My addition to Kitcher's claim is that necessity and universality extends to conclusions about embodied cognitive capacities, which are required to account for some of these assumed features of cognition.

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<sup>72</sup> Förster (2012, pp. 145–152) notes that there are ‘two alternative faculties of cognition’, both unavailable to humans: ‘non-sensible, i.e. intellectual intuition for which possibility (thinking) and actuality (being) coincide’ and ‘intuitive understanding which goes from the intuition of the whole to its parts’. Kant's discusses an ‘intuitive intellect’ in the *Critique of Judgment* (KU 5: 406); non-sensible intuition is discussed at A249, A256/B311–2, B307, and A286/B342. Non-sensible intuition is relevant in this case.

This qualified notion of embodiment as a transcendental condition also points towards a way of reading of Kant's transcendental idealism. Kant distinguishes between objects as 'phenomena' or 'appearances', which appear to us under their transcendental conditions, and objects as 'noumena' or as they are 'in themselves' apart from their transcendental conditions (A369). I suggest that this distinction can be drawn in terms of the capacity of bodily activity. By means of bodily activity, the cognitive subject has an intentional relationship to phenomena. We can cognize anything to which we are related through the body under empirical laws. The noumenal world of things-in-themselves consists in whatever cannot be related to this bodily perspective. As Kant writes, 'what the things may be in themselves I do not know, and also do not need to know, since a thing can never come before me except in appearance.' (A276-7/B332-3) I need to know how my bodily actions will affect the objects around me, and how those objects in turn affect me. I am dependent on my cognitive capacities to arrange the manifold of intuition in such a way that I can represent those objects. My inability to know what things are beyond any possible interaction with them does not undermine this function of my cognitive capacities. The result is a conception of a knowable, phenomenal world which is orientated towards human embodied activity – a world which includes the theoretical entities of natural science.

This account of transcendental idealism needs to be worked out in further detail at another occasion, but I want to make the point that an account of the role of the body in cognition does not have to be paradoxical under transcendental idealism. The worry was that Kant has to make the following claim: cognition depends on an object (the body), which is in turn dependent on the conditions of cognition. In answer to this concern, I have only read Kant as claiming that the activity of the cognitive subject contributes to the *representation* of objects, allowing us to refer to those objects. It does not produce objects in the sense of bringing about their existence. Thus, the cognitive activity of cognition depends on an object (the body) which can only be represented through that same activity, but is often not represented in most cases of cognition (except for empirical self-consciousness).

However, a problem for Kant's account of the role of the body in cognition still remains. In each case of cognition discussed in the previous chapters, there is the

problem of the conflict between the spontaneity and the material causality of the cognitive subject. On Kant's account, cognition of objects in space and time, empirical self-consciousness, and the whole enterprise of natural science necessarily involves the embodied activity of the cognitive subject. However, this seems to conflict with his attribution of spontaneity to the understanding. The problem intensifies when we consider that free and living human beings cannot appear in the Newtonian system of causal activity described in *MAN*. The problem of freedom is a concern raised by Kant in *KrV*, but the problem of life comes out of his discussion of the second law of mechanics in *MAN*. While defending this law, Kant rejects hylozoism, the thesis that all parts of matter are alive with internal causes like feelings and desires. He explains that Newtonian laws only describe the interactions of matter as an object of outer sense, interacting by external forces. Such laws do not apply to internal causes known in inner sense. Hylozoism would be the 'death' of the Newtonian project (*MAN* 4: 544). Kant's rejection of internal causes of matter has two implications. First, matter is lifeless, because 'life' involves the capacity to act on such internal causes. Second, even if matter were alive, it would not be free. There are two ways not to be free – to be like clockwork (not alive and not free), or to be an animal (alive but not free). All parts of matter, including material animals, are determined under causal laws. Internal causes such as thoughts or desires play no part in the changes in material beings.

The embodiment of the cognitive subject brings the confrontation between freedom and nature into sharper focus. Kant is already grappling with this issue in characterizing cognition as the result of both sensibility and the understanding, and in arguing for the dependence of inner experience on the capacity for experience of objects in space. He shows that there is no retreat available to an inner rational subject, because cognition of objects and the self is orientated towards embodied activity in the world. The subject is capable of constructing rules for herself, but this cannot be her only activity if cognition of objects in space and time is to be possible. Cognition is rational *and* causally efficacious activity.

The issue of the embodiment of the cognitive subject points towards the question of how there can be a free and moral agent, as explored in the Transcendental Dialectic of *KrV* and in the practical philosophy of the second *Critique*. This is a stronger notion of freedom than the spontaneity of the understanding, as it presupposes the possibility

of being the original cause of our own actions.<sup>73</sup> For Kant, this means that making the judgment ‘I should do x’ is sufficient for us to freely do x, without appeal to our desire for x, or indeed any other determination of the will – whether through external circumstances or internal sensible motives (*KpV* 5: 96-7). This stronger notion of the freedom of the moral agent is closely related to the embodiment of cognition – the moral agent can only be motivated to act by the moral law if she is conscious of herself as capable of action in the first place. The embodiment of the cognitive subject also points towards Kant’s discussion of the living, end-directed activity of biological organisms in the third *Critique*. The cognitive subject is able to experience organisms as end-directed and self-organizing only by analogy with her own activity. Thus, the embodied subject is the starting point of Kant’s discussion of moral and free agency in the world.

I believe that this thesis gives us reason to conclude that Kant’s theory of cognition should not be read as an account which isolates mental capacities, to the disregard of bodily conditions. Instead, his account of intentionality requires a distinctive embodied contribution from sensibility. His account of empirical self-consciousness depends on the subject’s capacity for bodily activity. This same bodily activity plays a central role in the empirical cognition of the causal community of material substances in space, the science of such a substance, and the irreducibility of its causal forces. Moving forward, Kant should not be read as rejecting embodiment but rather as articulating a notion of the embodied subject who is causally efficacious in accordance with cognitive rules and moral laws, without herself being subject to causes in the natural world.

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<sup>73</sup> The freedom required for morality is a very controversial issue, as is the relation to the spontaneity of the understanding. See Moran (2018) for a helpful overview, as well as Ameriks (2018). Influential readings include Guyer (1987, 2001, 2005); Allison (1990); Korsgaard (1996, 2008); and Reath (1989, 2006).

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